

# FINAL MISSION BAY SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

CITY AND COUNTY OF SAN FRANCISCO PLANNING DEPARTMENT • SAN FRANCISCO REDEVELOPMENT AGENCY

PLANNING DEPARTMENT FILE NO. 96.771E

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STATE CLEARINGHOUSE NO. 97092068

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## VOLUME III: SUMMARY OF COMMENTS AND RESPONSES







SOURCE: San Francisco Redevelopment Agency

- |  |   |   |
|--|---|---|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: red; border: 1px solid black;"></span> COMMERCIAL INDUSTRIAL              | <span style="display: inline-block; width: 15px; height: 10px; background-color: green; border: 1px solid black;"></span> MISSION BAY OPEN SPACE<br>(allows recreation-serving retail building east of Terry A. Francois Blvd.) | <span style="display: inline-block; width: 15px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></span> ADDITIONAL BAYFRONT OPEN SPACE (PORT PROPERTY) |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: darkred; border: 1px solid black;"></span> COMMERCIAL INDUSTRIAL / RETAIL | <span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black;"></span> HOTEL  | <span style="display: inline-block; width: 15px; height: 10px; background-color: darkgrey; border: 1px solid black;"></span> MISSION BAY PUBLIC FACILITIES  |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: darkblue; border: 1px solid black;"></span> MISSION BAY NORTH RETAIL      | <span style="display: inline-block; width: 15px; height: 10px; background-color: brown; border: 1px solid black;"></span> UCSF (includes City school site)  | <span style="display: inline-block; width: 15px; height: 10px; border: 2px solid black;"></span> PROPOSED BOUNDARIES OF MISSION BAY REDEVELOPMENT AREAS   |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: orange; border: 1px solid black;"></span> MISSION BAY RESIDENTIAL         |   |   |













**FINAL**

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**FINAL**  
**Subsequent Environmental Impact Report**  
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# MISSION BAY

## FINAL

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## ● XII. SUMMARY OF COMMENTS AND RESPONSES

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### A. INTRODUCTION

#### ORGANIZATION OF THIS SUMMARY OF COMMENTS AND RESPONSES

This document contains summaries of the public comments received on the Draft Subsequent Environmental Impact Report (SEIR) prepared for the Mission Bay project, and responses to those comments. Also included are errata and staff-initiated text changes to the SEIR.

All substantive comments made at the Draft SEIR public hearing before the City Planning Commission and Redevelopment Agency Commission on May 12, 1998, and all written comments received during the Draft SEIR public review period from April 11, 1998 to June 9, 1998 are presented herein by direct quotation, edited to delete repetition and nonsubstantive materials only. In some instances, minor edits have been made to the public hearing transcript; changes other than editorial corrections are noted.

Comments and responses are grouped by subject matter and are generally arranged by topic corresponding to the Table of Contents in the Draft SEIR. Each group of comments is followed by its set of responses; the order of the responses under each topic follows the order of the comments. Responses generally provide clarification of the Draft SEIR. They occasionally include changes in, or additions to, the text of the Draft SEIR. These modifications are indented and bolded within the response to make them easily discernible. Newly inserted words and phrases are underlined, as are new sentences or paragraphs that are incorporated into existing text. Underlining is not used if the modification is all new text. Text that is deleted is denoted with ~~strike through~~. As the subject matter of one topic may overlap that of other topics, the reader must occasionally refer to more than one group of comments and responses to review all information on a given subject. Where this occurs, cross references are provided. In Section C, Summary of Comments and Responses, endnotes are placed at the end of each topical subsection.

Some comments do not pertain to physical environmental issues, but responses are included to provide additional information for use by decision-makers.

These comments and responses have been incorporated into the Final SEIR as a new chapter. Text changes resulting from comments and responses have also been incorporated in the Final SEIR, as

indicated in the responses in boldface. In addition, changes to Chapter II, Summary, have been identified in the responses; the Summary has been updated with any further changes needed as a result of comments and responses.

The public hearing transcript, a copy of all letters received during the public review period, the administrative record, and background documentation for this SEIR are contained in Case File 96.771E, available for public review at the Planning Department, 1660 Mission Street, San Francisco.

## **PROJECT CHANGES UNDER CONSIDERATION BY THE PROJECT SPONSORS**

At this time, the project sponsors are considering several changes to the project that would involve adoption of four variants to the project as described below. These changes would have substantially the same impacts as the project, as discussed under Combination of Variants Currently under Consideration by the Project Sponsors in Section D, Staff-Initiated Text Changes, pp. XII.527-XII.545. Briefly, the changes would involve the following main elements:

- Terry A. François Boulevard would be realigned to the west to allow development of open space to the east. This Project Area open space would be integrated with approximately 2 additional acres of adjacent open space outside the Project Area on port property fronting the shore of the Bay that would be improved by Catellus. A small port commercial facility would be permitted within a portion of the Project Area bayfront open space.
- The Mission Bay South Retail land use designation would be eliminated and changed to the Commercial Industrial/Retail land use designation on the Esprit site and Castle Metals block.
- There would be no roadway crossing of the railroad tracks at Berry Street. Berry Street would be extended south to Common Street, and the retail space in the northwestern-most block of the Project Area would be reduced by 50%.



## B. LIST OF COMMENTORS

The following list of individuals submitted written comments during the public comment period of April 11, 1998, through June 9, 1998, and/or provided oral testimony at the public hearing on May 12, 1998, on the *Mission Bay Draft SEIR*. Some comments received during the public review period did not address the Draft SEIR. Those comments addressing the Draft SEIR are responded to in Section C, Comments and Responses. Section E presents the page index by commentor.

Ena Aguirre, Southeast Alliance for Environmental Justice (public hearing comments, May 12, 1998)

David Aldape, President, Alianza (public hearing comments and letter, May 12, 1998)

Muhammad Al Kareem, Bay View Merchants Association (public hearing comments, May 12, 1998)

Commissioner Dennis Antenore, Planning Commission (public hearing comments, May 12, 1998)

Richard Avanzino, President, The San Francisco Society for the Prevention of Cruelty to Animals (written comments, May 13, 1998)

Phyllis Ayer, Wildlife Subcommittee, Sierra Club, and Audubon Society (public hearing comments, May 12, 1998)

Buck Bagot, Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Joe Beresford, Chair, Homeownership Committee, Bay Area Organizing Committee; and St. Theresa Church (public hearing comments, May 12, 1998, and written comments, June 8, 1998)

Violetta Borjas, Bay Area Organizing Committee and St. Boniface Church (public hearing comments, May 12, 1998)

A.L. Breugem-Horlick (written comments, May 14, 1998)

J.A. Brown (written comments, May 7, 1998)

Michael Byrd (written comments, May 11, 1998)

Leslie Caplan, San Francisco Baykeeper (public hearing comments, May 12, 1998)

Roger Cardenas, President, Independent Cab Association (public hearing comments, May 12, 1998)

Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association (public hearing comments and letter, May 12, 1998, and written comments, June 8, 1998)

Beverley Chanley and Corbin Cherry (written comments, May 13, 1998)

Jim Chappell, President, San Francisco Planning and Urban Research Association (public hearing comments and letter, May 12, 1998)

Robin Chiang, Mission Bay Citizens Advisory Committee, and San Francisco Planning and Urban Research Association (public hearing comments and letter, May 12, 1998)

Jennifer Clary, Board of Directors, San Francisco Tomorrow (public hearing comments, May 12, 1998)

Jennifer Clary, Mary Anne Miller, and Norm Rolfe, San Francisco Tomorrow Mission Bay Committee (written comments, June 9, 1998)

Concerned San Francisco (written comments, May 7, 1998)

Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency (written comments, June 8, 1998)

Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee (written comments, June 9, 1998)

David R. Dawdy (written comments, June 8, 1998)

Doris Ostrander Dawdy (written comments, June 8, 1998)

Sue Markland Day, President, Bay Area Bioscience Center (public hearing comments, May 12, 1998)

Bernard A. Deck (written comments, May 12, 1998)

Barbara Deutsch (public hearing comments, May 12, 1998)

Tim Donnelly (written comments, June 9, 1998)

Commissioner Mark Dunlop, Redevelopment Agency Commission (public hearing comments, May 12, 1998)

Roy Evans, Transportation Engineer, Rail Safety and Carriers Division, Rail Engineering Safety Branch, Traffic Engineering Section, California Public Utilities Commission (written comments, June 9, 1998)

Arthur Feinstein, Executive Director, Golden Gate Audubon Society (written comments, June 8, 1998)

Marian E. Fricano (written comments, May 8, 1998)

Robert T. and Linda Fries (written comments, May 11, 1998)



Eric J. Ganther (written comments, May 7, 1998)

Denise Couter Graham, Local 790, Service Employees International Union (public hearing comments, May 12, 1998)

Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, the San Francisco Group of the Sierra Club (public hearing comments, May 12, 1998, and written comments, June 9, 1998)

Susan Guevara, St. Dominic Parish and Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Minister Ingrid Hacket, Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Jamil Hawkins (public hearing comments, May 12, 1998)

Sister Kathleen Healy, Associate Pastor, St. Theresa Church, and Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Gail Henigman (written comments, May 6, 1998)

Gail C. Herath-Veiby (written comments, May 22, 1998)

Paul Hessinger, Coalition for Better Wastewater Solutions (public hearing comments, May 12, 1998, and written comments June 9, 1998)

Commissioner Richard Hills, Planning Commission (public hearing comments, May 12, 1998)

Helen Hipshman (written comments, May 11, 1998)

Douglas G. Hogin (written comments, May 12, 1998)

Robert B. Isaacson, President, Mission Creek Conservancy (public hearing comments, May 12, 1998, and written comments, May 7, May 12, and June 5, 1998)

Espanola Jackson (public hearing comments, May 12, 1998)

Janet Jacobs, Project Director, Sustainable San Francisco (written comments, June 9, 1998)

Dwayne Jones, Executive Director, Young Community Developers (public hearing comments, May 12, 1998)

Tom Jones, Asian Neighborhood Design (public hearing comments, May 12, 1998)

Jeanne O. Kelley (written comments, May 11, 1998)

Doug Kern, Urban Watershed Program (public hearing comments, May 12, 1998)

Ellen Kernaghan (public hearing comments, May 12, 1998)

Mark Klein, San Francisco Chamber of Commerce (public hearing comments, May 12, 1998)

Natasha La Farouche (written comments, May 8, 1998)

Donald C. Langley (written comments, May 6, 1998)

Alex Lantsberg, Project Coordinator, Southeast Alliance for Environmental Justice (written comments, June 4, 1998)

Alex Lantsberg (public hearing comments, May 12, 1998)

Jeffrey Leibovitz (public hearing comments, May 12, 1998)

Niko Letunic, Bay Trail Planner, San Francisco Bay Trail Project (written comments, May 21, 1998)

James D. Lowé, Transit Planner, San Francisco Municipal Railway (written comments, May 26, 1998)

Lower Potrero Hill Neighborhood Association (petition dated September 29, 1997 signed by 431 people)

Michael R. Lozeau, Executive Director, San Francisco BayKeeper (public hearing comments, May 12, 1998, and written comments, June 9, 1998)

Ben Lubbon, Kaisehomme Limited (public hearing comments, May 12, 1998)

Rick Mariano, Chairman, Rincon Point-South Beach Citizens Advisory Committee (written comments, May 15, 1998)

Jeff Marmer, Coalition for Better Wastewater Solutions (public hearing comments, May 12, 1998, and written comments, June 9, 1998)

Comer Marshall, Executive Director, Urban Economic Development Corporation (public hearing comments, May 12, 1998)

Darrell J. Maxey, P.E., Chief Engineer, Caltrain (written comments, June 9, 1998)

Enola Maxwell (public hearing comments, May 12, 1998)

Anne G. McDermott (written comments, May 28, 1998)

Charles Michael (public hearing comments, May 12, 1998)

Mary Anne Miller, San Francisco Tomorrow (public hearing comments, May 12, 1998)

Patricia Miller (written comments, May 7, 1998)



Dick Millett, Potrero Hill Boosters & Merchants Association (public hearing comments, May 12, 1998)

Richard Mlynarik (written comments, May 25, 1998)

R. Clark Morrison, Esq., Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C. (written comments, May 15, 1998)

Jean Neblett, Potrero Hill Boosters and Merchants Association (public hearing comments, May 12, 1998)

Michael Nurre (written comments, May 11, 1998)

Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy (written comments, May 29, 1998)

Commissioner Neli Palma, Redevelopment Agency Commission (public hearing comments, May 12, 1998)

Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter (public hearing comments, May 12, 1998, and written comments, May 20, 1998)

Don Parker, Vice President, Bay Area Development, Catellus Development Corporation (written comments, June 8, 1998)

Maria Poncel, San Francisco Partnership (public hearing comments, May 12, 1998)

Donna Preece (written comments, May 7 and 8, 1998)

Luanna Preston, Treasurer, Joint Council No. 2, Service Employees International Union; and Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Maria Quintanilla, St. Dominic Church and Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Amy V. Quirk, President, Sunset Community Democratic Club (written comments, April 14, 1998 and June 9, 1998)

Jon Rainwater, San Francisco League of Conservation Voters (public hearing comments, May 12, 1998)

Daniel F. Reidy, President, Landmarks Preservation Advisory Board (written comments, May 29, 1998)

Antero A. Rivasplata, Chief, State Clearinghouse, Governor's Office of Planning and Research (written comments, May 27, 1998)

Joel B. Robinson, Acting General Manager, San Francisco Recreation and Park Department (written comments, May 29, 1998)

Kim Rogers (public hearing comments, May 12, 1998)

Norman Rolfe, San Francisco Tomorrow (public hearing comments and letter, May 12, 1998)

Janet Rosen and Stuart Kremsky (written comments, May 6, 1998)

Dr. Maria Christina Bosaric Salem, St. Dominic Church and Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Father Peter Sammon, Pastor, St. Theresa Church and Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Kenneth C. Scheidig, General Counsel, Alameda-Contra Costa Transit District (written comments, June 9, 1998)

Diana Scott (written comments, June 9, 1998)

Christine Shirley, Environmental Scientist, Arc Ecology (written comments, June 12, 1998)

David Siegel, Lower Potrero Hill Neighborhood Association and Mission Bay Citizens Advisory Committee (public hearing comments, May 12, 1998)

Stan Smith, Secretary/Treasurer, San Francisco Building Construction Trades Council; and Vice-Chair, Citizens Advisory Committee for Mission Bay (public hearing comments, May 12, 1998)

David Snyder, Executive Director, San Francisco Bicycle Coalition (public hearing comments, May 12, 1998, and written comments, June 8, 1998)

Carlos Soto, Speaker Bureau, Tobacco, Alcohol and Drugs, Latino Center on Alcoholism for Spanish Speaking (public hearing comments and letter, May 12, 1998)

Bruce W. Spaulding, Vice Chancellor, University of California, San Francisco (written comments, June 9, 1998)

Patti Tamura, Local 790, Service Employees International Union and Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Mike Thomas and William Bradway, Communities for a Better Environment (public hearing comments, May 12, 1998)

Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment (written comments, June 9, 1998)

W.R. Till, Chief, Bridge Section, U.S. Coast Guard (written comments, May 26, 1998)



Torbin Torpe-Smith, Mission Bay Harbor Association (public hearing comments, May 12, 1998)

Reverend Floyd Trammell, Pastor, St. Luke CME Church (public hearing comments, May 12, 1998)

Diane Verze-Reeher, St. Dominic Church, United Educators, and San Francisco Bay Area Organizing Committee (public hearing comments, May 12, 1998)

Calvin Welch, Council of Community Housing Organizations (written comments, May 26, 1998)

Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee (written comments, June 9, 1998)

Earl White, President, San Francisco Black Chamber of Commerce (public hearing comments, May 12, 1998)

Kate White, Program Director, Urban Ecology, Inc. (written comments, June 9, 1998)

Donald C. Williams (written comments, May 13, 1998)

Ed Williams, Bay Area Organizing Committee and St. Dominic Church (public hearing comments, May 12, 1998)

James Williams (public hearing comments, May 12, 1998)

Bill Wilson, Environmental Planning & Design (written comments, June 2, 1998)

John Wilson, 1900 Third Street L.L.C. and Mission Bay Citizens Advisory Committee (public hearing comments, May 12, 1998)

Victoria Winston, Bay Area Organizing Committee and St. Dominic Parish (public hearing comments, May 12, 1998)

Calvin Womble, President, The Ellington Group (public hearing comments, May 12, 1998)

Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club (written comments, June 9, 1998)

Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee (public hearing comments, May 12, 1998, and written comments, June 9, 1998)

Harry Y. Yahata, District Director, Department of Transportation (written comments, May 26, 1998)

Anna Yee, Chair, Mission Bay Citizens Advisory Committee (public hearing comments, May 12, 1998)

John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants (written comments, June 9, 1998)

## C. COMMENTS AND RESPONSES

### GENERAL

#### EIR Process

##### Extend Comment Period

###### *Comments*

I think we need two hearings and we need to focus on the environmental issues. . . .(Mary Anne Miller, *San Francisco Tomorrow*)

Is there a possibility of extending that one or two weeks just to accommodate the request from the public? (Commissioner Neli Palma, *Redevelopment Agency Commission*)

Just a couple of substantive comments, but I'm also in favor of the two-week extension. (Commissioner Richard H. Hills, *Planning Commission*)

###### *Additional concerns:*

This process has been very rushed from the beginning. Given the huge size of this SEIR, we believe it would have been good faith. . .for the City to have allotted more time for comment. We have not had adequate time to analyze this document. In every way this has been a rush. We are submitting additional concerns that are not spelled out in the expected narrative form. We are including a list of areas that we consider problems that we would like addressed (see attachment 10). (Jeff Marmer, *Coalition for Better Wastewater Solutions*)

###### *Response*

Following the joint public hearing on May 12, 1998, to receive comments on the Draft SEIR, the City Planning Commission and San Francisco Redevelopment Agency Commission extended the public comment period for 14 days, for a total public review period of 59 days (April 11 through June 9, 1998).

##### Brown and Caldwell Report

###### *Comments*

Finally, CEQA requires any new information, such as, Ron Crites's report to be reviewed and commented on within 45 days. CBE is requesting an extension of 45 days to comment on his report. (Mike Thomas, *SAFER!/CBE Organizer*; Lesley Barnhorn, *Legal Intern*; and Scott Kuhn, *Staff Attorney, Communities for a Better Environment*)

At a minimum, we urge you to reopen the public comment period for 45 days after the final release of the report by the PUC Consultant on alternative wastewater options. We support the comment put



forth by Trent Orr, attorney for the Mission Creek Conservancy that the City cannot "dribble out significant information" during the 45 day comment period. That report has been rushed, is still not complete, and will not be able to [be] made public until after the close of written deadline. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

It is my understanding that the period for public comment has been extended to June 9, 1998, from the original date of May 26. It is my opinion that the comment period should be extended still further due to the release on June 2 of the report on alternative approaches to stormwater and wastewater on the Bayfront (Technical Report: PRELIMINARY SCREENING OF ALTERNATIVE WASTEWATER AND STORMWATER MANAGEMENT TECHNOLOGIES, Brown & Caldwell), and there is support in CEQA for such an extension. (*Bill Wilson, Environmental Planning & Design*)

We are also concerned about the very short amount of time the public has had to take into account new information developed by the Technical Review Committee. We believe that a significant review period should be provided after all the relevant information is made available. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

While the Planning Department has extended the comment period to June 9, the public will have at most one week to review the report by Mr. Crites. This falls significantly short of the absolute minimum 45-day period that the public must be allowed under CEQA to review an EIR submitted to the State Clearinghouse. Furthermore, CEQA does not allow information critical to a full understanding of the issues in the EIR to be released at selective intervals during an ongoing public comment period under the theory that if the overall comment period is 45 days or more the public can be denied its right to a full 45 days to review all such critical information. If important new information surfaces during the review process, which it has, the comment period should be extended the full 45 days beyond the emergence of the important new information. (*Alex Lantsberg, Project Coordinator, Southeast Alliance for Environmental Justice*)

We have alternative scientists hired by the PUC. The community has pushed for it for years. They have been hired late in the process, haven't had time to submit the report. It's supposed to be reviewed by an expert panel. And the alternatives have already been dismissed by Catellus, and this report isn't even in.

So we are asking for an extension of this deadline because we think it allows us. . .

So we are saying, extend this deadline until these alternative scientists can look at the situation and the public can meet with them and make recommendations before you close these comments. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

We also should postpone the deadline for the comments until after the technical committee has had a chance to meet. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

The next. . . thing we'd like to ask is for an extension of the deadline for written comments so that there can be input from the technical consultants. (*Leslie Caplan, San Francisco Baykeeper*)

Also I would like to let you know that written comments for this should be extended. There will be a technical review committee that will be reviewing the supplement that's looking over this entire EIR.

And I think it's very important for us to be able to get that information from the technical review committee and be able to develop that and include it into our own written comments. (*Alex Lantsberg*)

We have a golden opportunity here. And I'd like to say, what's the rush? Why is everybody seemingly rushing into this before our own City's technical review committee puts together a report that could say how this does fit in as a piece of the environmental puzzle? We could fit it in correctly instead of haphazardly. . .

And the City has hired a Mr.[Crites] to do studies on these large projects. His report should be in, as was mentioned earlier. (*Paul Hessinger, Coalition for Better Wastewater Solutions*)

I was going to suggest along the lines of extending the comment period that we [ought] to choose the option for two weeks because of the report, apparently, that's going to be coming in on the wastewater issues on June 2nd. We out to give people a few days to be able to absorb that and try to respond to it. (*Commissioner Dennis Antenore, Planning Commission*)

In the absence of such a liaison [a wastewater liaison within the Mayor's Office], we appeal to you directly for a thirty-day extension of the deadlines on the Mission Bay SEIR. Specifically, we seek a public hearing date after June 12, 1998, and the closure of public, written comment after June 26, 1998. (*Amy V. Quirk, President, Sunset Community Democratic Club*)

The Planning Department has denied the public a reasonable and legally adequate comment period to review and respond to critical information on these issues yet to be produced by the Public Utilities Commission.

MCC [Mission Creek Conservancy] and its members had hoped to have the benefit of a review by Ron Crites, technical consultant to the Public Utilities Commission ("PUC"), of sewer and stormwater issues presented by the Project, before commenting on these aspects of the Project as presented in the DEIR. The Public Utilities Commission, with Mr. Crites' assistance, has begun a study requested by the Board of Supervisors of alternative wastewater treatment approaches for Bayside sewer and stormwater discharges. Only when that study is completed will PUC be able to determine the best means to reduce pollutant discharges to Mission Creek and the Bay. The huge Mission Bay Project could obviously be a significant contributor to such discharges, and a fair look at alternative treatments for such discharges from the Project is mandated by CEQA as a part of the Project DEIR. However, Mr. Crites' report to the PUC and the CAC on wastewater issues relating to Mission Bay will not be available until at least June 2, 1998.

While the Planning Department has extended the comment period on the DEIR until June 9 so that the public will have perhaps a week to review this significant new information and address it in its comments, this falls far short of the absolute minimum 45-day period that the public must be allowed under CEQA to review a DEIR submitted to the State Clearinghouse. Pub.Res.C. § 21091(a); 14 CCR § 15087(c). CEQA does not allow information critical to a full understanding of the issues in a DEIR to be released at selective intervals *during* an ongoing public comment period under the theory that, if the overall comment period is 45 days or more, the public can be denied its right to a full 45



days to review all such critical information. Rather, if important new information emerges during the review process, the comment period should be extended the full 45 days beyond the emergence of the important new information. Pub.Res.C. §21092.1; 14CCR §15088.5. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

It is our understanding that the deadline for public comment on the EIR was extended by the Planning Commission and the Redevelopment Authority from May 26, 1998 to June 9th, so that the public and the TRC [Technical Review Committee] could review a set of recommendations from alternative wastewater expert Mr. Ron Crites and then the TRC could present a report to the public for the public's use in preparing written comments on the EIR. . .

Indeed, SCDC understands that even the TRC has not had time to prepare a single set of written recommendations regarding the EIR by the June 9th public comment deadline. . .

The deadline for submitting comments on the EIR should be extended for at least thirty days to enable the entire TRC to review the necessary materials, confer as a group and submit a single set of comments and recommendations, which the public can then review in a timely fashion, discuss with the TRC and then use to prepare comprehensive comments on the EIR. (*Amy V. Quirk, President, Sunset Community Democratic Club*)

#### Alternative Wastewater Technologies

We appreciate the joint action of the Planning and Redevelopment Commissions in extending the comment deadline to allow more time for the experts on the Technical Review Committee of the PUC to review it and make recommendations on alternative technologies. Unfortunately, we have not yet received the report of the TRC, and are therefore unable to use their expertise to comment on this important component of the Mission Bay Plan. We must therefore request yet another extension of the comment period for the Mission Bay SEIR until 30 days after the publication of the TRC's recommendation. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

#### Response

The comments request varying extensions of the public review period for the Draft SEIR to allow for review of information in a technical report prepared by Brown and Caldwell under contract to the San Francisco Public Utilities Commission (SFPUC). The scope of the report was to evaluate a variety of alternative wastewater/stormwater treatment technologies and reuse alternatives that could be utilized as part of the Mission Bay project to reduce pollutant loads to the Bay.

The SEIR conservatively found that, while there would be no significant water quality impacts from the project, the project would contribute to potential cumulative water quality impacts. The SEIR identifies two mitigation measures (K.3 and K.4 on p. VI.47) that would avoid the potentially significant impact by requiring the project to eliminate any contribution to increases in combined sewer overflows (CSOs) from the City's wastewater system, and requiring the project to implement alternative technologies or other means to treat stormwater discharges to the Bay. The measures were specifically formulated as performance criteria, rather than identifying specific technologies, to allow

flexibility in how they might be achieved and to potentially allow use of evolving technologies over the more than 20-year build-out of the project.

The Brown and Caldwell report was commissioned to assist the SFPUC in determining the feasibility and effectiveness of various options for how the project could implement the mitigation measures. At the time the project's infrastructure is approved, the City would determine whether to impose the mitigation measures, and, if imposed, how they would be implemented. The decisions would be documented in various approval documents and CEQA Findings. The SEIR mitigations, in the form of performance criteria, will thus be addressed in the project approval process. The Brown and Caldwell report does not present significant new information, and the report confirms the analysis in the SEIR. Thus, there is no need, and no requirement under CEQA, to extend the SEIR public review process while the various options for implementing the mitigations are discussed and debated.

The Brown and Caldwell report was presented to the public on June 2, 1998. In response to requests from the public for additional review time, the Planning and Redevelopment Commissions extended the May 26th closing of the public comment period for an additional 14 days, for a total public review period of 59 days (April 11 through June 9, 1998).

## **Naming of Streets**

### *Comment*

Street names. The DSEIR notes on V.E.41 that future street names are unknown at this time. While we understand that the naming of streets is within the Board of Supervisors jurisdiction, we would like to see Mission Bay street names reflect the natural and historic character of Mission Bay, in accordance with the Design Objectives. Please also note that Channel Street is actually the waterway known as Mission Creek or China Basin Channel - one of only two navigable streets in the United States. While the frontage road known as "Channel Street" will disappear when Mission Bay South is built, the name should be retained to identify the Channel in various city documents, and the street should not be vacated. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

### *Response*

The comment correctly notes that the naming of streets is within the jurisdiction of the Board of Supervisors. The comment requests that the Channel Street name and right-of-way be retained for China Basin Channel to identify the Channel in city documents. This concern should be directed to decision-makers during the project review process.



## **Cumulative Impacts From Other Projects**

### ***Comment***

Mission Bay should not be treated piecemeal. With the May 26, 1998, article in the Chronicle concerning an immediately adjacent area to Mission Bay for which a 12,000 homes, schools, and shops development is “under review at City Hall” for near future development, the EIR should be a combined report discussing both developments together. Their added impacts will be much greater than that for Mission Bay alone. Cumulative impacts should always be considered, rather than considering each project as if it were an isolated instance of development. (*David R. Dawdy*)

### ***Response***

The comment requests that a proposal for 12,000 homes “under review at City Hall” be included in the environmental review for Mission Bay. The comment refers to a study by the San Francisco Planning and Urban Research Association (SPUR), which suggests rezoning the Central Waterfront, an area roughly bounded by Mariposa Street, I-280, Islais Creek, and the Bay, to encourage the development of housing and live/work units. Most of the area is currently zoned for heavy industrial use. The proposal is outlined in the March 1998 SPUR Newsletter. SPUR is a private planning organization and is not affiliated with the Mayor’s Office, Planning Department, the Port, or San Francisco Redevelopment Agency.

Although SPUR has shared its vision with City officials, the “proposal” is still very much in the formative stage and subject to extensive changes before any proposal is actually undertaken for study by the City. The SPUR proposal would require substantial review and feasibility analysis, a number of public approvals, and substantial changes to the existing land use regulatory regime before it could be implemented. The SPUR proposal is not under review by the Planning Department, Redevelopment Agency, or any other governmental agency with jurisdiction over the area, nor is the SPUR proposal in those agency’s work programs.

The Planning Department is studying land use supply and demand in the industrial areas on the City’s east side, and the results of that study may inform a decision whether to pursue rezonings such as those proposed by SPUR. Other, very different rezoning proposals may be advanced. At this time it is uncertain whether rezonings or new redevelopment areas will be formally considered by the City outside of those underway and already incorporated into the SEIR’s cumulative impact analysis, as described below.

If rezonings or new redevelopment areas are formally considered by the City, substantial feasibility analysis and environmental review as well as a large number of public approvals and changes to the current land use regulatory regime would be required. At this time, development that could occur under a rezoning proposal advanced by a private planning organization would be highly speculative to

forecast and assume and does not constitute “closely related . . . reasonably foreseeable probable future projects . . .” that are to be included in a CEQA discussion of cumulative impacts (CEQA Guidelines Section 15355(b)).

All reasonably foreseeable cumulative impacts are analyzed in the SEIR. As is stated in Endnote 62 on pp. V.C.44-V.C.45, concurrent environmental review of several major planning and transportation projects in San Francisco (such as Mission Bay North and South Redevelopment Plans, Bayview/Hunters Point Redevelopment Plan Amendment, MUNI Third Street Light Rail Project, and the Candlestick Point Stadium-Mall) dictates a consistent forecast of population and employment growth in San Francisco reflecting the development that could be accommodated in the various project areas. All of these environmental analyses use the same cumulative growth forecast of San Francisco population and employment in 2015 as the basis for cumulative transportation analysis, as well as for growth inducement and related analyses of housing, business activity, and land use impacts.

Not all of the major planning and redevelopment project areas assumed for cumulative analysis purposes may actually be adopted or built out to the extent assumed. The assumptions are conservatively high for CEQA analysis purposes, and to the extent actual development falls short of projections, cumulative impacts proportional to population and employment (e.g., transportation, air quality, traffic, and noise) would be overstated.

The Keyser Marston Associates (KMA) 2015 cumulative growth scenario used in the SEIR/1/ includes household, population, employed residents, and employment estimates for the City as a whole and for the various project areas as well. The KMA projections assume substantial development by 2015 largely as proposed for several areas under consideration as redevelopment areas, as well as for the Presidio. Overall, the cumulative growth scenario projects more employment and population growth for San Francisco by 2015 than does ABAG's *Projections '96*. Compared to the ABAG projections for 2015, the cumulative growth scenario assumes that more aggressive development efforts on the part of the City, including redevelopment planning, capital improvement funding, housing and business assistance, and catalyst projects would result in more demand for new development and re-use of existing space than would otherwise be the case.

Table XII.1 shows the specific SEIR assumptions for the Central Waterfront area and for other areas to the south of the Mission Bay Project Area that were used directly in the SEIR transportation analysis. For comparative purposes, the table also presents the estimates that were the original basis for these projections, the Association of Bay Area Governments' allocation of *Projections '96* to traffic analysis zones (TAZ). Consistent with current zoning for the area, a relatively small amount of population growth is projected for the Central Waterfront area in both the KMA and the ABAG



**TABLE XII.1: COMPARISON OF GROWTH ASSUMPTIONS FOR THE  
AREAS SOUTH OF THE MISSION BAY PROJECT AREA**

| TAZ/b/                        | Cumulative Growth Study/a/ |               |               |               | Projections '96 by Traffic Analysis Zone (TAZ)/a/ |               |               |               |              |               |
|-------------------------------|----------------------------|---------------|---------------|---------------|---|---------------|---------------|---------------|--------------|---------------|
|                               | Population                 |               | Jobs          |               | Population  |               |               | Jobs          |              |               |
|                               | 1995                       | 1995-2015     | 1995          | 2015          | 1995  | 2015          | 1995-2015     | 1995          | 2015         | 1995-2015     |
| <b>Central Waterfront</b>     |                            |               |               |               |   |               |               |               |              |               |
| 662                           | 684                        | 1,368         | 684           | 6,166         | 8,700   | 2,534         | 684           | 1,368         | 684          | 3,378         |
| <b>Greater South Bayshore</b> |                            |               |               |               |   |               |               |               |              |               |
| 367                           | 5,336                      | 7,571         | 2,235         | 4,801         | 13,592  | 8,791         | 5,336         | 7,570         | 2,234        | 2,245         |
| 369                           | 12,830                     | 14,678        | 1,848         | 2,890         | 4,346   | 1,456         | 12,830        | 14,653        | 1,823        | 1,694         |
| 370                           | 237                        | 237           | -             | 19,804        | 20,754  | 950           | 237           | 630           | 393          | 3,569         |
| 371                           | 11,107                     | 12,405        | 1,298         | 3,892         | 5,005   | 1,113         | 11,107        | 12,216        | 1,109        | 2,080         |
| <i>Subtotal</i>               | <i>29,510</i>              | <i>34,891</i> | <i>5,381</i>  | <i>31,387</i> | <i>43,697</i>                                     | <i>12,310</i> | <i>29,510</i> | <i>35,069</i> | <i>5,559</i> | <i>9,588</i>  |
| <b>Hunters Point Shipyard</b> |                            |               |               |               |   |               |               |               |              |               |
| 368                           | 934                        | 5,844         | 4,910         | 906           | 6,108   | 5,202         | 934           | 3,227         | 2,293        | 1,120         |
| <b>TOTAL</b>                  | <b>31,128</b>              | <b>42,103</b> | <b>10,975</b> | <b>38,459</b> | <b>58,505</b>                                     | <b>20,046</b> | <b>31,128</b> | <b>39,664</b> | <b>8,536</b> | <b>14,086</b> |

*Notes:*

/a/ As presented in background tables prepared by Keyser Marston Associates, Inc., "TAZ Modifications, San Francisco Cumulative Growth," July 31, 1997.  
Keyser Marston Associates prepared the estimates by TAZ for the Cumulative Growth Study.

The Association of Bay Area Governments (ABAG) prepared the Projections '96 estimates by TAZ.

/b/ Traffic analysis zone.

*Source:* Hausrath Economics Group.

projections. Moving south, compared to ABAG, the KMA projections show somewhat less population growth in the Greater South Bayshore area but more population growth in the Hunters Point Shipyard area, consistent with current plans for that area. For the areas taken as a whole, population growth under the *Cumulative Growth Study* scenario exceeds that of *Projections '96* by about 2,400 people. In all of these TAZs south of the Project Area except for the Central Waterfront, the *Cumulative Growth Study* projections used in the SEIR analysis assume more job growth than shown in the ABAG projections. This reflects the *Cumulative Growth Study*'s higher citywide employment growth scenario compared to *Projections '96*. The projections for the *Cumulative Growth Study* assume about 6,000 more jobs and 11,000 more residents in all of the southern areas considered together than is the case for growth under the *Projections '96* scenario.

### **SEIR Organization**

#### ***Comment***

General Comments: Volume III p. XII.1 Report Outline. This Index is the ideal guide to topics covered in the EIR and it is buried at the end of Volume III! It is so much more useful for navigating through the three volumes than the Table of Contents, List of Tables, List of Figures combined. The Index should have been printed at the end of Volume 1. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

#### ***Response***

The location of the Report Outline, as well as its purpose, is stated on p. i, Table of Contents by Chapter, in each volume of the SEIR. The placement of the report outline in Volume III (Volume IV of the Final SEIR) is intended to assist the reader since the index can be open while the reader is reviewing Volumes I and II, the volumes containing the majority of the technical analyses.

#### ***Comment***

Since visual impacts of the height and bulk of buildings were raised in the Draft EIR hearing, they will of necessity be covered in the Comments and Responses, but the final EIR should be one in which the Draft and the C & R documents are interleaved, or the comments will not be very useful during the many years that this EIR will be referenced. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

#### ***Response***

The comment requests that the Comments and Responses and the Draft SEIR be integrated in the Final SEIR. Under CEQA, the Final SEIR consists of the Draft SEIR, the Comments and Responses document, and the certification motion. Changes to the Draft SEIR text are identified in this Comments and Responses document and will be incorporated into the appropriate volumes of a



compiled Final SEIR document after certification. Thus, the compiled Final SEIR requested by the comment will be prepared.

### **General Comments on the SEIR**

#### ***Comments***

As explained in detail below, MCC is deeply concerned to find that the DEIR does not adequately address the inconsistency of the Project as proposed with existing plans to protect and enhance the natural environment of Mission Creek and its banks, fails to take account of the importance and uniqueness of Mission Creek as a rare Bay wetland and wildlife refuge within the dense urban setting of the City's eastern Bayside, does not acknowledge the Project's inconsistency with the City's General Plan policy regarding per capita provision of open space, and fails adequately to address the potential contributions of pollutants to Mission Creek from Project area sewage and stormwater discharges. These deficiencies must be addressed in the EIR before a final Project can be lawfully approved, and the Project itself should be revised in the ways suggested to preserve and enhance the environment of Mission Creek and improve the environment of the dense new development proposed for the Mission Bay site. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

The height, densities, and uses proposed are too extreme. And we also are terrified of losing our wetlands and open space. And Mission Creek is of particular concern. (*Ellen Kernaghan*)

#### ***Response***

These comments raise general concerns on the completeness of information in the SEIR. They preface more detailed comments on the issues raised, which are responded to in corresponding detail in various topic sections. Issues regarding existing plans for China Basin Channel (Mission Creek) are addressed in the response in Vegetation and Wildlife, "CAC Development Standards and Guidelines" on pp. XII.410-XII.413; issues regarding China Basin Channel as a wetland and wildlife habitat are addressed in the response "Bird Displacement Due to Human Activities" on pp. XII.413-XII.421; and issues regarding existing wetlands are addressed in the response "EdgeTreatments and Loss of Wetlands" on pp. XII.408-XII.410. Issues regarding General Plan policies for provision of open space are addressed in the response in Community Services and Utilities, "Quantity of Open Space in Redevelopment Plans" on pp. XII.433-XII.440. Issues regarding Project Area sewage and stormwater discharges are addressed in the responses in Hydrology and Water Quality, "Bayside Planning Model," on pp. XII.300-XII.322, "Stormwater Pollutant Loading," on pp. XII.396-XII.399, and "Illustrative Mitigation Scenarios" on pp. XII.253-XII.277. Issues regarding project heights, densities, and uses are addressed in the response in Land Use, "Compatibility of Proposed Project" on pp. XII.49-XII.51.

## Editorial Comments

### *Comments*

a. Please review the second sentence of the second paragraph under Parking on page II-12. The word "not" appears to have been omitted from the words "could" and "find."  
(W.R. Till, Chief, Bridge Section, U.S. Coast Guard)

### *Response*

The fifth paragraph on p. II.12 is correct as written. Those searching for parking in the Project Area "could find parking difficult;" that is, could find it difficult to park.

## Project Profit

### *Comment*

And I would also ask that there be an open discussion of the finances -- it appears that there are things that are not open to the public -- so that we can see the projected profit margin of Catellus -- that we have no objection to it if it's reasonable -- and see and balance it against the welfare of the City of San Francisco. (Father Peter Sammon, Pastor, St. Theresa's Church, and Bay Area Organizing Committee)

### *Response*

The profit potential of Catellus is not within the purview of the environmental review process. Rather, decision-makers can use available financial information to inform their decisions regarding approval of the proposed Redevelopment Plans and other project approvals.

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## NOTES: General

1. Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, March 30, 1998.



## PROJECT DESCRIPTION

### Land Ownership

#### *Comments*

The DEIR should clarify the ownership of the “Castle Metals Site” or Parcel X-3 as it is referred to in the Draft Redevelopment Plan. Where land ownership is described in the Summary and in the Project Description, these ownership distinctions are not made clear, except in Footnote 5, page III.52. It is appropriate to clearly identify each of the landowners early on in the document since distinctions between broad project-wide or Catellus-only obligations are necessary elsewhere in the document, as noted below.

Page III.4, 4th full paragraph: Please identify by address or APN each of the private parties in the Redevelopment Project Area.

Page III.6, Figure III.B.2: Please revise footnote 3 to say “This property under three ownerships is referred. . .” (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

#### *Response*

Land ownership per se is not an important consideration in environmental review for adoption of Redevelopment Plans because all properties within the Redevelopment Plan Areas would be subject to the basic land use controls in the adopted Redevelopment Plans. Where additional controls relate only to Catellus-owned property, this distinction is made in the SEIR and will be addressed as applicable in the Redevelopment Plans.

As the comments state, the site identified in Figure III.B.2, p. III.6, as the Castle Metals site is under three ownerships, as stated in Endnote 5, p. III.52. 1900 Third Street is owned by the 1900 Third Street L.L.C., 1830 Third Street is owned by Sheila O. Carraro, and 1800 Third Street is owned by Rinaldo Carraro. Endnote 5, p. III.52, has been amended to correct a street address as follows:

**Several properties within the Project Area that are under other private ownership include: 1) the Castle Metals site at Third and Mariposa Streets, which consists of 1900 Third Street owned by 1900 Third Street, L.L.C., 1830 Third Street owned by Sheila O. Carraro, and ~~1800~~ 1810 Third Street owned by Rinaldo Carraro; 2) the Esprit site at Illinois and 16th Streets owned by Esprit de Corps; and 3) the Third Street Properties at Third Street south of Mission Rock Street, which consists of 1401 Third Street owned by Potter Electric Inc., 1455 and 1475 Third Street owned by Harms Land Company, and 1481 and 1501 Third Street owned by ARES Commercial Properties.**

Landowners of other private properties are also included in this endnote. Figure III.B.2 correctly shows the sites within the Project Area that are owned by private entities other than Catellus and names the sites. Endnote 5, which specifies the various landowners, is within the paragraph on

p. III.4 that refers to Figure III.B.2. Figure V.B.1 shows the Assessor's Block and Lot numbers within the Project Area. Figure V.B.1, p. V.B.2, and Figure I.1, p. I.45, have been amended to correct Assessor's Block and Lot numbers: 1900 Third Street from 3922-03 to 3992-03; 3848-01 to 3948-01 at Pennsylvania and 16th Streets; and to add AB 3837-01 to the site behind the Third Street Properties. (Revised Figure V.B.1 is shown on the following page.) As with the Catellus-owned sites, development on other private properties would be subject to the Redevelopment Plans and Design for Development documents, if adopted, the conditions of approval of the project including relevant mitigation measures, as adopted, and any other agreements, including Owner Participation Agreements, that individual property owners may enter into with the Redevelopment Agency or the City.

The Castle Metals site is included in a new variant, Variant 5: Castle Metals Block Commercial Industrial/Retail Variant (see the response in Variants, "Request for a Castle Metals Commercial Industrial/Retail Variant" on pp. XII.481-XII.496).

### **Project Area Boundaries**

#### ***Comments***

First thing I noticed is that the project boundaries include a lot of Cal-Train property and right-of-way, and so forth. That's really not the correct thing to do. The project boundary should be revised and exclude all Cal-Train properties, easements and rights-of-way, including the one on Seventh Street and any environmental impacts should be corrected on the report. (*Norman Rolfe, San Francisco Tomorrow*)

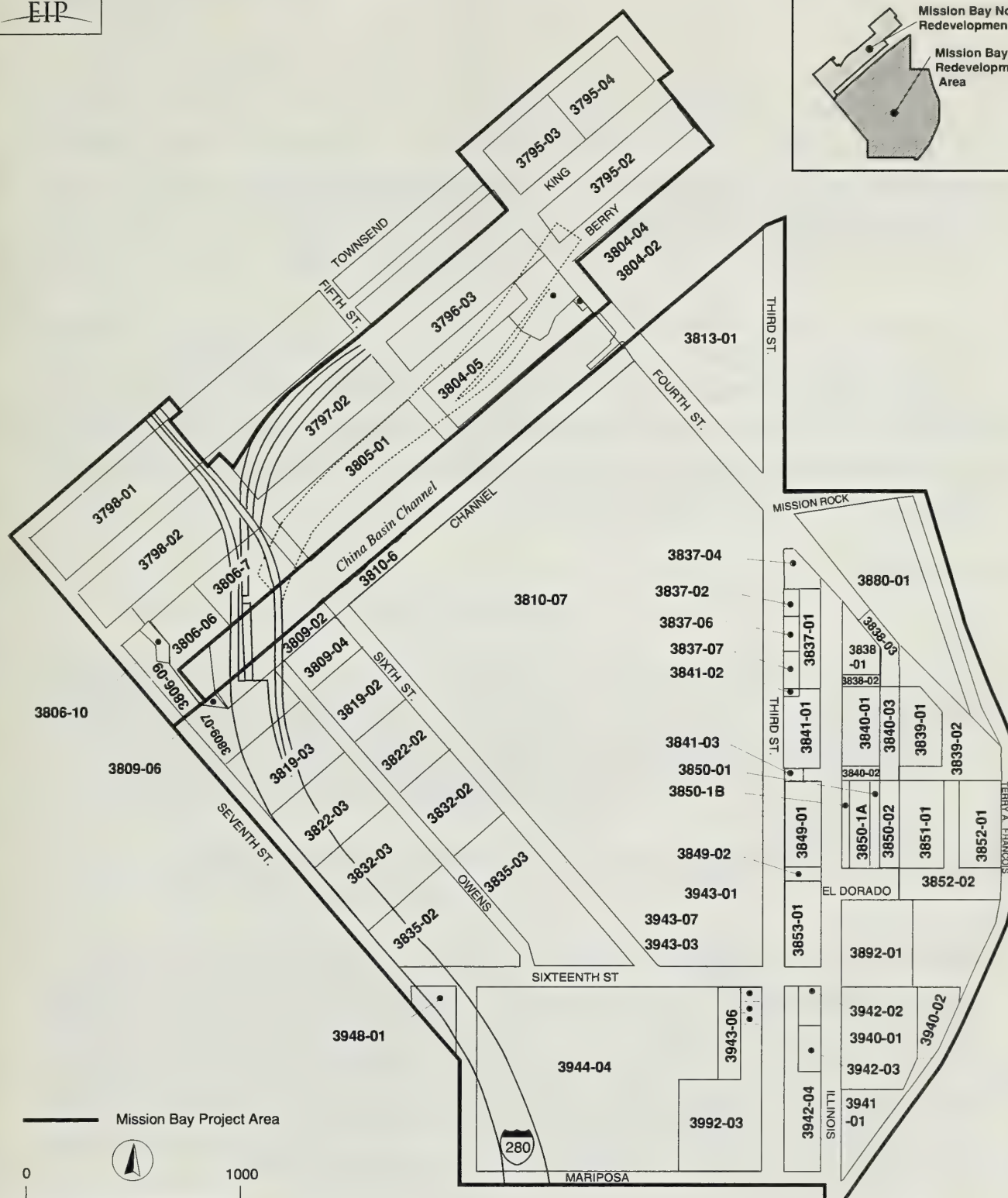
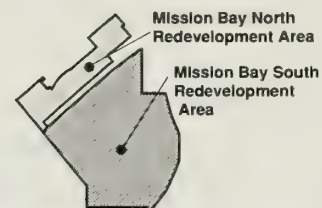
The project boundaries as given in subject report include land under control of Caltrain, i.e. - the Peninsula Corridor Joint Powers Board (JPB). Since this land probably will not be available for this project, the project boundaries should be revised to eliminate all land under control of the JPB, including Caltrain right-of-way along Seventh Street. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

Many of the figures in the DEIR show the existing Caltrain right-of-way as some use other than railroad. No portion of the Caltrain right-of-way has been vacated or abandoned (Figure V.B.2). The figures should be clarified to show that Caltrain intends to continue occupying all of the property for the purpose of operating train service indefinitely. Caltrain is now in the process of developing plans to reconfigure and improve its track, signals, buildings and other facilities at its 4th and Townsend Street terminal. (*Darrell J. Maxey, P.E., Chief Engineer, Caltrain*)

#### ***Response***

The San Francisco Redevelopment Agency, as a state agency, can establish and adopt redevelopment areas irrespective of land ownership, easements, and rights-of-way. Land ownership per se is not an environmental review issue, and impacts outlined in this report would not be affected by Caltrain





965551-8-20-98

SOURCE: EIP Associates, San Francisco Department of City Planning

## MISSION BAY SUBSEQUENT EIR

FIGURE V.B.1 (REVISED) ASSESSOR'S BLOCKS AND LOTS COMPRISING THE PROJECT AREA

holdings. Page III.15 states that the Caltrain tracks would not be altered for development of the project. Since publication of the Draft SEIR, Catellus has agreed to construct the westbound King Street frontage road adjacent to the rail yard between Fifth and Sixth Streets. This would involve the removal of some tracks. The construction of the road and removal of tracks are part of the Waterfront Transportation Projects and not part of the Mission Bay project. (See the response in Transportation, "King Street Frontage Road" on pp. XII.106-XII.107.)

As the comments suggest, Caltrain controls the right-of-way along Seventh Street; however, the underlying title is held by Catellus, as shown in Figure III.B.2. The Caltrain right-of-way is appropriately designated public facilities in Figure III.B.3, which shows the Land Use program. Figure V.B.2 shows parking and open land area over the active tracks since they are in use during the day. As noted in the response in Land Use, "Active Freight Rail Lines" on p. XII.51, Figure V.B.2 is amended to designate the active rail freight lines.

## Floor Area Ratio

### *Comment*

Page III.54: Floor Area Ratio Definition: The supporting definition of developable land area in this paragraph is different from the definition provided in the Draft Redevelopment Plan. The two should be consistent. We have offered, in our comments on the Draft Redevelopment Plan, the following:

**"Developable Land Area.** All areas within a lot including without limitation on-site private parking areas and structures, private open space, private lanes, and private sidewalks; but excluding public streets, utility easements within public rights-of-way, rail rights-of-way, and public sidewalks."

(*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

### *Response*

Attachment 5 of the proposed Redevelopment Plans defines developable land area for the purpose of calculating floor area ratio (FAR) as "all areas within a lot including without limitation private open space, private lanes, and private sidewalks; but excluding public streets and rights-of-way, and public open space." Endnote 27, on p. III.54, defines developable area as "assumed to be exclusive of vara streets, public rights-of-way, and utility easements." The definition of floor area ratio presented in the comment is generally consistent with these definitions. It is within the discretion of the Redevelopment Agency to adopt the comment's definition of developable area.



## **Parking on Mariposa Street**

### ***Comment***

Page III.19, first partial paragraph, line 6: Elsewhere it is stated that there will be a loss of on-street parking on Mariposa Street but this sentence is silent on Mariposa Street. Please clarify if on-street parking will or will not be allowed on Mariposa Street. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

### ***Response***

The comment refers to the discussion in Chapter III, Project Description, which summarizes the major revisions to the street pattern in the Project Area. The paragraph to which the comment refers lists those streets that would no longer have on-street parking. Some on-street parking would remain on Mariposa Street, thus Mariposa is not listed in this paragraph. See the more detailed discussion on p. V.E.99 of Section V.E, Transportation, which states that 65 spaces on Mariposa Street would be eliminated as a result of the project.

## **Notification Process for Infrastructure Improvements**

### ***Comments***

Numerous large scale changes are planned for the Project Area for which some process of notifying all of the landowners is needed. While not an environmental concern per se, these topics are not explicitly mentioned in [the] Redevelopment Plan so the DSEIR is our point of reference. Will there be an EIR mitigation monitoring plan that addresses these issues?

Page II.15: 1st full paragraph: It states that a Transportation System Management Plan will be prepared. The 1900 Third Street LLC would like to be notified when one is in draft form for review purposes in case it includes obligations for the LLC.

Page III.35: Review Process for Proposed Phases: This states that preliminary infrastructure plans will be prepared as part of each specific development phase. If a phasing plan exists for infrastructure abutting or otherwise affecting the use or redevelopment of the 1900 Third Street site, we request notification as soon as possible. Also, since infrastructure needs are usually met with area-wide improvements, the 1900 Third Street LLC would like to be notified when plans are prepared and submitted for infrastructure improvements on Third Street, Mariposa Street, and Fourth Street south of 16th Street. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

### ***Response***

To the extent that changes proposed for the Project Area are adopted as mitigation measures, they will be included in a mitigation monitoring plan that will be prepared for the project. The basic land use program and infrastructure system will be described in various project documents, including the Redevelopment Plans, the Design for Development documents, the proposed Owner Participation

Agreements between Catellus and the Redevelopment Agency, and the Subdivision Code and Regulations, among others. Each proposed Owner Participation Agreement will include, among other things, an Infrastructure Plan and a Transportation Management Plan. The proposed Owner Participation Agreements and the proposed Mission Bay Subdivision Ordinance and its implementing regulations will also describe the process for future review of specific development proposals submitted by Catellus. As specified below, these documents will be available for public review in accordance with applicable notice periods required by law prior to their approval.

As required under Community Redevelopment Law, the San Francisco Redevelopment Agency must notify the public by publication in a local newspaper for four successive weeks in advance of its consideration of a Redevelopment Plan. Notice is also sent to all tenants and property owners within the Redevelopment Plan Project Area boundaries at least 30 days prior to the Redevelopment Agency's consideration of the plan. The Redevelopment Agency is required to list on an agenda all matters associated with the approval and adoption process for a Redevelopment Plan Area upon which the Redevelopment Agency Commission will take action, such as the Owner Participation Agreements. The Board of Supervisors is also required to publish a notice in a local newspaper four weeks in advance of the adoption of an ordinance approving a Redevelopment Plan. Under a Board of Supervisors rule, documents that propose major policy decisions, such as the proposed Mission Bay Subdivision Ordinance, must be lodged with the Clerk of the Board 30 days prior to formal action on the item by the Board or one of its Committees. Further, the Sunshine Ordinance requires public access to public records and proceedings. Under the Brown Act (Open Meetings Act), the Redevelopment Agency, the Board of Supervisors, and all other public agencies are required to post an agenda 72 hours in advance of a public meeting, listing all matters under consideration.

See the responses in Transportation, "Transportation Systems Management" on pp. XII.174-XII.178 for information about Transportation Systems Management.

## **Financing**

### *Comments*

Page III.35, Review Process for Proposed Phases and Page III.36: Concept of Adjacency: These pages discuss major infrastructure improvements and OPA agreements and the concept of adjacency but the DEIR does not explain how these improvements are financed or by whom. Where and by whom is this determined? Is this information available? (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

Further, that there is a lack of clarity as to the assignment of responsibility for the funding and implementing of those features. (*David Siegel, Lower Potrero Hill Neighborhood Association; and Mission Bay Citizens Advisory Committee*)



***Response***

The infrastructure program, including the financing component, would be governed primarily by the proposed Owner Participation Agreements between Catellus and the Redevelopment Agency, including the Infrastructure Plan and Financing Plan that will be provided as attachments, and their associated implementing documents. Subject to the terms and conditions set forth in the Owner Participation Agreements and the Mitigation Monitoring Plan, the majority of the infrastructure would be constructed by property owners incrementally as development proceeds. The Redevelopment Agency would repay or reimburse the owner for the cost of constructing the infrastructure either through special taxes, or bonds secured by special taxes, levied on the property under a Community Facilities District, or through the payment of any net available property tax increment, or tax allocation bonds issued based on such increment. The Financing Plans and associated documents will be made available for public review in accordance with applicable notice periods required by law prior to their approval.

These financing mechanisms, as available to the Redevelopment Agency, are discussed in the SEIR on pp. III.38-III.39. See the response in Mitigation Measures, "Funding of Mitigation Measures" on pp. XII.457-XII.458 for further information.

**University of California**

Constitutional Exemption

***Comment***

As a citizen I'm also concerned about the 43-acre UCSF site. Since UCSF is exempt from local planning and zoning, they should state they will still cooperate with the local zoning agencies. (Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter)

***Response***

The comment addresses UCSF's exemption from local planning and zoning requirements. The SEIR states on p. III.12 of Chapter III, Project Description, that "UCSF has chosen to work cooperatively with local governments regarding land use and planning issues in order to assure that the mutual interests of the local jurisdiction and UCSF are addressed." Further, "...the Goals and Objectives for the UCSF 1996 Long Range Development Plan (LRDP) indicate that UCSF will develop its uses and plan for growth consistent with city planning and zoning codes and applicable land use plans." However, it is correctly noted that UCSF is constitutionally exempt from local planning and zoning laws whenever land under its control is used for University purposes.

UCSF Central Utilities Plant**Comment**

But I was told that UC would build their own sewage plant, and it would not be coming an overflow to Bayview/Hunters Point. I don't know if that's true or not, but this is what I was told. (*Espanola Jackson*)

**Response**

Page III.13 states UCSF's intention to build a central utilities plant. This may be the "plant" to which the comment is referring. The central utilities plant would provide electricity and steam; no separate sewage treatment or sewage treatment facility is proposed by UCSF. Information regarding effects of the overall project's proposed sewer system is addressed in responses in Hydrology and Water Quality on pp. XII.189-XII.190.

UCSF LRDP Goals and Objectives**Comment**

The project analyzed in the Draft SEIR is compatible overall with all of the topical areas of the LRDP *Goals and Objectives*, including Community, Human Resources, Information Technology, Infrastructure and Utilities, Instructional Facilities, Building Design, Campus Design and Development, and Transportation and Circulation. (*Bruce W. Spaulding, Vice Chancellor, University of California, San Francisco*)

**Response**

Comment noted.

**Interim Uses****Comments**

Interim uses at the Mission Bay Project must be more rigorously controlled than is currently proposed, or they could lead to long-term deviation from the stated intent of the Mission Bay Plan and significant changes in its environmental impacts. . .

The DEIR does not indicate any specific limits on the duration of such uses. Interim parking lots for the Giants, UCSF, and perhaps others, with limited landscaping, also seem to be inadequately circumscribed in scope and duration. DEIR III.17. While the DEIR suggests that any interim uses subject to CEQA would require further CEQA review (III.16), many of the interim uses described -- residential sales and rental offices, construction staging facilities, parking lots, and storage facilities -- would in all likelihood be individually subject only to the minimal scrutiny of a negative declaration. Thus, unless the lax rules for the long-term creation of "interim" uses at the Project site are considerably tightened up, the EIR on the Project should assess the collective impacts of the potential presence of such non-program facilities in the Project area for several decades on the Project's visual



amenities, traffic, public open space, and all other relevant topics. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

Because Mission Creek Harbor contains the only residents of Mission Bay South for the foreseeable future, we are extremely concerned about the discussion of Interim Uses (V.B.12, V.B.17, V.D.15, V.E.115, V.F.43), which will be permitted to continue for "up to 15 years, plus possible extensions at the discretion of the Redevelopment Agency", and which will permit "minor changes including *enlargements, intensifications, extensions or expansions* to accommodate ongoing business operations" without any environmental review of the impacts, such as noise, dust, traffic, parking. We have experienced substantial problems with some previous and existing "interim" uses, including traffic (particularly speeding) and parking problems associated with the Golf Driving Range, serious problems maintaining our public access frontage park, toilets and public water facilities from depredations of the homeless population attracted by the soup kitchen in Firehouse No. 30, and severe dust problems caused by dirt stockpiles (Homer J. Olsen and McPeak Engineering, in particular) and parking and storage of trucks and busses, particularly in areas adjacent to Mission Creek. We strongly recommend that approval of interim uses be subject to public review of neighbors impacted by them, and that all interim uses that have increased traffic, parking, noise or other environmental impacts be required to mitigate those impacts, including, at the very least, landscaping, street and intersections improvements and initiation of street sweeping in the area. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

Page V.B.17: It is disturbing that "at least 35 acres of paved parking area" may be part of the Redevelopment Area "for an indeterminate period." Not only do such parking lots degrade the urban design elements of the project and contribute to environmental problems by discouraging transit use and increasing air and water pollution, but they will establish travel patterns which will not easily be changed as the project builds out. A constituency and market which sees this expanse of parking as an entitlement will be established, and it will be extraordinarily difficult to convert this "interim" use of valuable land to more economically and environmentally sound purposes. Strict limits on the size and longevity of "interim" parking lots should be established as part of the project guidelines. (*Richard Mlynarik*)

Volume I. III.16. The proposal to allow interim uses of up to 15 years, with additional 5-year extensions, is inappropriate to this project. The designation of this area as a Redevelopment Area is intended to speed development of this acreage. A lucrative interim use could undermine implementation of the project, particularly in areas that are intended for open space. If the plan proves so deficient that it can't be executed within 15 years, the Plan itself should be re-examined. We would ask that interim uses be reviewed at least every 5 years. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

### *Response*

The comments raise concerns about the duration and potential environmental impacts of interim use of the Project Area as allowed by the proposed Redevelopment Plans. The SEIR analyzes the effects of potential, as well as anticipated, interim uses such as the Giants Ballpark surface parking lots and UCSF surface parking lots. As stated on p. III.16 of Chapter III, Project Description, temporary uses such as fairs, carnivals, truck parking and loading, seasonal sales lots, and convention staging facilities would be permitted as of right in the Project Area for up to 90 days under the proposed

Redevelopment Plans. Page III.16 states that the approval of interim uses is within the purview of the Redevelopment Agency and interim uses are approved based upon a determination that “the authorized uses will not impede the orderly development of the Project Area as contemplated in this Plan.”/1/ Interim uses are not exempt from the California Environmental Quality Act (CEQA) and, as is stated on p. III.16, would require separate environmental review at the time they are proposed. Such specific interim uses are not covered in this SEIR because their type, location, and timing are unknown.

For those uses requiring environmental review, an initial study would be conducted to determine if the possibility of a significant impact on the environment could occur. Only if the determination is made that no significant environmental effect could occur would a preliminary negative declaration be circulated for public review. Contrary to one comment’s assertion that a negative declaration affords “minimal scrutiny,” a negative declaration is circulated for public review upon careful and documented analysis concluding that a significant environmental effect could not occur. Negative declarations contain sufficient information for the public and decision-makers to understand the environmental consequences of proposed projects. In addition, mitigated negative declarations are commonly issued, which provide for mitigation measures that are adopted as part of the project to avoid potential impacts identified during the course of preparation of such a negative declaration. Negative declarations are reviewed by the public and may be appealed during their public review period to the Redevelopment Commission or Planning Commission, as appropriate, which then determines whether the negative declaration is adequate, or whether a significant impact could occur from the project, necessitating preparation of an EIR. At such hearings, anyone may present testimony evidencing a significant environmental effect.

The analysis of potential interim uses is included in the following subject areas: in Section V.B, Land Use, on p. V.B.17, including general construction effects on p. V.B.16; in Section V.D, Visual Quality and Urban Design, pp. V.D.15-V.D.16; in Section V.E, Transportation, pp. V.E.114-V.E.116; in Section V.F, Air Quality, p. V.F.43; in Section V.G, Noise and Vibration, pp. V.G.25-V.G.26, including construction noise and vibration effects on pp. V.G.24 and V.G.31-V.G.32; in Section V.J, Contaminated Soils and Groundwater, on pp. V.J.67-V.J.82, regarding construction effects; in Section V.K, Hydrology and Water Quality, pp. V.K.55-V.K.57, including construction effects on pp. V.K.57-V.K.61; in Section V.L, Vegetation and Wildlife, p. V.L.15; in Section V.M, Community Services and Utilities, “Sewers and Wastewater Treatment,” pp. V.M.52- V.M.54, including construction effects on pp. V.M.35-V.M.36, V.M.42-V.M.43, and V.M.50-V.M.52.

The comments raise concerns about the effects of the project on the residents of Mission Creek Harbor as the “only residents of Mission Bay South.” The Mission Creek residents are not in the Project Area and thus not residents of Mission Bay South. The houseboaters are located outside the



Project Area in an adjacent area and the project land use effects on the Mission Creek community are analyzed on pp. V.B.26-V.B.27.

The comments suggest limitations on interim uses, such that approval of interim uses be subject to public review by neighbors and that the review of interim uses occur every five years rather than the initial approval period of 15 years. As part of the project approval process, decision-makers could consider adoption of these and other suggestions. The Redevelopment Plans will set forth provisions for interim uses. Like permanent uses, interim uses would be subject to adopted mitigation measures to address any significant impacts. Placing limits on the size and longevity of the surface parking lots is within the purview of the Redevelopment Agency as stated on p. III.16.

As stated on pp. III.16-III.17, V.B.17-V.B.18, and V.E.110, interim surface parking for the Giants Ballpark and UCSF could amount to at least 35 acres of paved parking area. Approval of the Giants Ballpark parking lots on Catellus and port-owned lands predates the environmental review process for Mission Bay South. Giants parking was intended for an interim period so that the potential need for permanent structured parking could be assessed based on experienced demand. The leases for Catellus land are intentionally short, i.e., five years, in order to accommodate the development of the proposed Mission Bay project, as stated on p. III.17. The leases for port land are for a longer period, i.e., 10 years, to allow the Giants some flexibility to develop permanent structured parking, if determined necessary.

The development of the UCSF site is dependent on a number of issues, including the availability of funding. The Regents would approve specific development projects or groups (or phases) of projects as funding becomes available. As development on that site progresses, UCSF would have an incentive to construct permanent structured parking to address demand for building space.

### **Giants Ballpark Parking Lots**

#### ***Comment***

The SEIR states that 13 acres of Port property adjacent to the Project Area will be used to provide parking for 1800 vehicles. The Giants plan to provide parking for approximately 2,000 vehicles in this area. The project description should be corrected and any assumptions based on the lower figure should be adjusted. (*John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants*)

#### ***Response***

As requested by the San Francisco Giants, the third and fourth sentences in the first full paragraph on p. III.17 have been revised as follows:

**On about 13 acres of port property adjacent to the Project Area, surface parking for ~~1,800~~ about 2,000 vehicles would be provided for the first 10 years of ballpark operation, until 2010. The ballpark parking for about 5,000 vehicles has been approved by the Zoning Administrator in conjunction with approval of the Giants Ballpark.**

This change does not affect the analysis, as ballpark parking would total 5,000 spaces, whether on Catellus or Port property, as approved by the Zoning Administrator. Any increases in the number of spaces would require further review and approval.

### **U.S. Coast Guard Approvals**

#### ***Comment***

Please expand the bullet under U.S. Coast Guard on page III.51 to read “Approves bridging of the Channel (a navigable waterway) under Section 9 of the Rivers and Harbors Act of 1899, as amended. (W.R. Till, Chief, Bridge Section, U.S. Coast Guard)

#### ***Response***

At the request of the Coast Guard, the bulleted item under “U.S. Coast Guard” on p. III.51 has been revised to read as follows:

- **Approves bridging of the Channel (a navigable waterway) under Section 9 of the Rivers and Harbors Act of 1899, as amended.**

### **Mission Creek Harbor Association Leasehold**

#### ***Comment***

The design for Mission Bay appears to incorporate some portions of MCHA’s leasehold for a portion of South Channel Park and move MCHA’s parking outside our leasehold. Note 10 on IV.9. does not mention the land area in the MCHA leasehold. While MCHA is willing to consider relocation of our storage sheds and possibly some of the parking, under conditions which have been discussed with Catellus, the SEIR should either address the impact of this design on the MCHA leasehold, including the proposed bicycle paths, pedestrian circulation, etc., or the project should clearly show the entire MCHA leasehold as being outside the project area, and should be redesigned accordingly. (Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club)

#### ***Response***

The Mission Creek Harbor Association (MCHA) leasehold would not be altered as part of the project. The comment is correct that, although the houseboats are not within the Project Area, a portion of the leasehold is within the Project Area. The leasehold includes 50 parking spaces adjacent to the existing Channel Street frontage road, as well as landscaped shoreline area along the entire length of the marina (860 feet).<sup>2/</sup> The project would relocate Channel Street south of its existing right-of-way



renamed Owens Street; this would allow for the development of a park (see pp. III.17-III.19). Endnote 91 on p. V.E.126 also states that "although on-street parking would be eliminated on Channel Street, the existing 50-space parking area leased by the Mission Creek Harbor Association from the Port of San Francisco would remain." If improvement plans call for elimination of existing parking spaces, as the comment notes, discussions between the project sponsors and MCHA would be necessary to identify any alternative parking arrangements to the extent required by the lease. Thus, no additional analysis is necessary.

Endnote 10 on p. IV.9 has been revised as follows:

**Regarding the China Basin Channel, the proposed Mission Bay North Redevelopment Area extends to the Channel Street right-of-way on the northern edge. The Mission Bay South Redevelopment Area's boundary in the Channel is more complicated. The boundary is along the edge of the Mission Creek Harbor Association leasehold, which runs in the water of China Basin Channel and includes 50 parking spaces, as well as a landscaped shoreline area along the length of the marina (860 feet). The proposed Mission Bay South Redevelopment Area does not include the houseboats.**

## Height Zone Maps

### *Comment*

Appendix. Figure 3, page A.8 It is unsupportable to put the height zone diagram in the Appendix when it is needed to explain the project in the project description section! Yet, in the Setting Section ( Vol. I, Figure V.A.4), the existing heights are clearly set forth and easy to read. The proposed heights should have been presented on the opposite page, or on a tracing sheet which could have been overlaid on the existing height map.

In any case, the proposed height changes should be clearly expressed in numbers (40', 65', 160') not in "HZ" designations, with references to a Key. As a visual aide, Figure 3 is too small, extremely difficult to read and requires that a person be already familiar with the project in order to visually assign the height variations to locations on the diagram. To communicate to the average reader the heights actually allowable, height limit numbers should be laid onto the map which should be enlarged twofold at least. Why couldn't this most important diagram have been made bigger and laid out as a fold-out? What does "see Diagram" mean in the Key? (See this diagram? I've already gone into the unreadability of this diagram. Have I missed some other diagram?) (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

### *Response*

The comment refers to Figure 3, on p. A.8 of the Initial Study, which was submitted to the public for review on September 20, 1997. This figure contained the most current information available at that time. Figure III.B.5, p. III.23 in Chapter III, Project Description, shows the numbered height zones under consideration when the Draft SEIR was published for the proposed Redevelopment Plans and

refers to Table III.B.2, pp. III.24-III.25, which includes detail about the percentage of land coverage of the base, mid-level, and tower heights allowable. (Note that a combination of project features and variants currently under consideration by the project sponsors is reviewed in this document as Variant G in Section D, Staff-Initiated Text Changes, "Combination of Variants Currently Under Consideration" on pp. XII.527-XII.545.) Due to the complexity of the height zones, it would not be useful to indicate the upper height limit since only a portion of each height zone could be developed to the tower limit. Using the table and figure, the reader is able to comprehend what the range of allowable heights in the zones would be, discern which areas would be restricted in height, and also discern approximately where towers may be located. See the response in Plans, Policies, and Permits, "Request for Overlay Graphics" on pp. XII.40-XII.41 for further discussion of the height zone figures and tables.

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NOTES: Project Description

1. Section 304.3(B) Redevelopment Plan for the Mission Bay South Redevelopment Project and Section 304.3(B) Redevelopment Plan for the Mission Bay North Redevelopment Project, March 30, 1998.
2. Bay Conservation and Development Commission, Permit No. 7-76 (Issued July 20, 1976, As Reissued through Amendment No. One) Amendment No. One, July 29, 1986.



## PLANS, POLICIES, AND PERMITS

### CAC Design Standards and Guidelines

#### *Comment*

Although the DEIR makes these admissions, it fails to acknowledge their plain inconsistency with the provisions of the CAC's Design Standards and Guidelines noted above. Indeed, Part V.A of the DEIR, "Plans, Policies, and Permits," fails to make any mention of the CAC or the Standards and Guidelines it produced for the Mission Bay Project, despite the clear requirement of CEQA that a proposed project that would "[c]onflict with the adopted environmental plans and goals of the community where it is located" is to be viewed as having a significant environmental impact in that respect. CEQA Guidelines, 14 CCR §15000 *et seq.*, Appendix G(a). Such an impact, under CEQA, must be revealed in the DEIR and mitigated to the full extent feasible before the project can be lawfully approved. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

#### *Response*

The comment points out that the Citizens Advisory Committee's (CAC) Design Standards and Guidelines have not been directly addressed in Section V.A, Plans, Policies, and Permits, of the SEIR. The CAC's Design Standards and Guidelines have been forwarded to the Redevelopment Agency and will in large part form the basis for Design for Development documents for Mission Bay North and Mission Bay South. Please refer to p. III.21 in Chapter III, Project Description, for discussion of the role of the CAC. Although the CAC's Design Standards and Guidelines are not an adopted environmental plan within the meaning of CEQA, they are addressed because the Redevelopment Agency has used these provisions in large part to inform its Design for Development document. Accordingly, it was determined that the CAC document would be the source of useful information in describing anticipated design controls and objectives for the Project Area at the time the SEIR was prepared. Specific mention of the CAC Design Standards and Guidelines can also be found in Endnote 10 on p. V.D.46.

The comment also raises concerns that the project itself is potentially in conflict with the CAC's Design Standards and Guidelines, and that requirements set forth in CEQA that proposed projects conform with adopted environmental plans and goals of the community will not be met. The proposed project consists of two Redevelopment Plans as well as associated Design for Development documents that together would govern the implementation of the development of the Mission Bay Project Area. The project does not contain proposals for specific building designs; rather, it sets forth land use designations, conditions of development, and building constraints that would guide development for the Project Area. The CAC's Design Standards will form the basis, but will not necessarily constitute all of, or contain precisely the same provisions as, the Design for Development documents for Mission Bay North and Mission Bay South. Therefore, any physical development

project that results from implementing the Redevelopment Plans and Design for Development documents would generally conform with the CAC's Design Standards and Guidelines to the extent that they are incorporated into the Design for Development documents.

Moreover, CEQA does not consider conflicts with local plans and policies to be significant impacts, unless those plans and policies contain specific environmental standards. For instance, a project which proposes development or plans for development which may conflict with local zoning or land use controls does not constitute, per se, a significant impact; zoning and land use designations are amendable, not permanent, controls. However, if the proposed project or plan for development conflicted with local policies which set forth criteria for air quality, for instance, then the project would be considered to have a significant environmental impact. Potential impacts on the environment that could result from adopting the proposed Design for Development documents and from development that could result from implementing those documents are addressed in the appropriate sections of the SEIR.

#### **1990 Mission Bay Plan Policies for Mission Creek**

##### ***Comment***

Furthermore, the DEIR, in its discussion of the Project's impacts on the 1990 Mission Bay Plan, also fails to acknowledge the inconsistency of the proposed habitat destruction in and along Mission Creek with the policy of that plan to assure that the use of Mission Bay "preserves the natural values of the land." DEIR V.A.8. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

##### ***Response***

The comment is concerned that plans pertaining to China Basin Channel (Mission Creek) are inconsistent with policies in the 1990 *Mission Bay Plan* regarding the need for development which "preserves the natural values of the land." The *Mission Bay Plan* is proposed to be rescinded and replaced in the General Plan by reference to the proposed Redevelopment Plans for Mission Bay North and Mission Bay South./1/ Because the proposed project includes the rescission of the 1990 *Mission Bay Plan* and adoption of other amendments to the General Plan, new plans for development would not be consistent with those portions of the existing General Plan, including the *Mission Bay Plan*, that are proposed to be modified. Potential physical impacts of the implementation of the proposed Redevelopment Plans for Mission Bay North and Mission Bay South on China Basin Channel are discussed on pp. V.L.6-V.L.16 in Section V.L, China Basin Channel Vegetation and Wildlife.



## Sustainability Plan

### Comment

As you are aware, a project may normally have a significant effect on the environment if it will “conflict with adopted environmental plans and goals of the community where it is located”. Although the City’s Planning Department does not consider inconsistencies with plans and policies “significant” environmental impacts under CEQA, as a public disclosure document, we believe it is prudent, if not mandated by statute, to provide for a full analysis of the proposal with respect to the City’s endorsed *Sustainability Plan* (Board of Supervisors, July 21, 1997, Resolution No. 692-97).

The discussion of the *Sustainability Plan* on pages V.A.11 and 12 of the Mission Bay EIR needs to be expanded to illuminate the importance of this issue and provide a more comprehensive analysis of the applicability of the *Sustainability Plan* to future development in the Mission Bay redevelopment area. (Janet Jacobs, Project Director, Sustainable San Francisco)

### Response

The reference by the comment to the Sustainability Plan discussion is to pp. V.A.11-V.A.12 of Section V.A, Plans, Policies and Permits, which simply describes the Sustainability Plan. A general evaluation of the project in light of Sustainability Plan principles is presented on pp. V.A.37-V.A.39.

### Comments

And this City does have a sustainability plan, and I hope that in not only the environmental analysis portion of this process, but in the implementation of the process, that these commissions and the project will work closely with the department of environment and the Board of Supervisors to really make this a model of environmental sustainability. (Jon Rainwater, San Francisco League of Conservation Voters)

Include in the EIR an analysis of feasible actions and objectives from San Francisco’s *Sustainability Plan* that the Mission Bay project could implement. Such an analysis would be more fully in the spirit of the Supervisor’s endorsement and would be useful for decision makers. . . (Janet Jacobs, Project Director, Sustainable San Francisco)

### Response

Under CEQA, the purpose of an EIR is to identify significant impacts on the environment resulting from a proposed project, and to identify ways to avoid or reduce those significant impacts. It is not the purpose of an EIR to suggest other kinds of changes to a proposed project, such as those contained within the non-binding Sustainability Plan guidelines. To do so would be outside the legislative purpose and scope of an EIR. Decision-makers may, however, choose to consider those, or other, guidelines in the approval process. The EIR provides information about existing and potential future physical environmental conditions, and as such can support a variety of advocacy positions and enable the public and decision-makers to form opinions on the project’s consistency or

inconsistency with various policies, goals, and objectives. Such positions can be pursued through communications with project sponsors and decision-makers through the political process.

### *Comment*

In light of the public sector funding, which is a significant portion of project financing, and the Supervisors' endorsement of the *Sustainability Plan*, the Mission Bay project should not be approved without being responsive to the City's sustainable development policies now and as they evolve over the project's planning horizon. (*Janet Jacobs, Project Director, Sustainable San Francisco*)

### *Response*

Comment noted. This statement is not a comment on the SEIR but an opinion about the project and its responsiveness to sustainable development policies that is best expressed during project approval hearings before various city and other approval bodies, including the Planning and Redevelopment Agency Commissions and the Board of Supervisors.

### *Comments*

The DEIR fails to adequately address the consistency of the Mission Bay Plan with the City's Sustainability Plan, the Goals of which have been adopted by the San Francisco Board of Supervisors. Following are a few of the relevant goals:

To protect and restore remnant natural ecosystems. The Plan doesn't even protect the existing remnants, never mind help to restore what has been lost.

To reclaim all wastewater. Mission Bay presents an unusual opportunity to create infrastructure to facilitate water reclamation and reuse. How are these opportunities being taken advantage of?

To minimize stormwater flows into the combined sewer system. How does the plan attempt to accomplish this?

To discharge only wastewater that does not impair receiving water and supports restoration and habitat goals. The present plan appears to **increase** the flow of wastewater into Mission and Islais Creeks. What is the impact of these discharges on wildlife and on the people who fish in the Bay for food?

To achieve long-term enhancement and restoration of local marine and fresh water habitats. One way to help restore Bay habitats is to treat stormwater runoff before it reaches the Bay. One proven way to treat stormwater is through the use of constructed wetlands, which also would help meet the City's biodiversity goals. What study has been done of the effectiveness of constructing wetlands at Mission Bay for water quality improvement and habitat enrichment? (*Ruth Gravanis, Golden Gate Audubon Society; Conservation Committee, The San Francisco Group of the Sierra Club*)

In conclusion, let us not forget the City's Sustainability Plan which has not fared well in this SEIR. Vol. I at V.A.37-38. Indeed, given the level of effort in the SEIR to explain away problems rather than deal directly with them, one might ask: Why did we bother writing a Sustainability Plan? In



short, as currently described and evaluated, BayKeeper does not believe the Project lives up to the goals described for sewage overflows and storm water management. The Project should improve on each of those categories—not make them worse. To increase the pollution discharges from storm water, CSO overflows and the Hunters Point sewage plant is exactly the opposite goal specified in the Sustainability Plan. BayKeeper, however, remains hopeful that the opportunities presented by Catellus' Mission Bay proposal will still be realized. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

#### **Response**

As explained on pp. V.A.11 and V.A.37-V.A.38 of Section V.A, Plans, Policies and Permits, a general evaluation of the project in light of Sustainability Plan principles was included in the SEIR for informational purposes, in response to requests received during the public scoping process. The Sustainability Plan is not an adopted plan of the City and County of San Francisco, but was endorsed by the Board of Supervisors as a non-binding guideline for City policy and practice. The SEIR provides sufficient information about the project and its potential impacts to enable the public and decision-makers to form opinions about the project's consistency with Sustainability Plan policies.

The potential impacts on wildlife and on beneficial uses of Bay waters, including fishing, are discussed in detail in the Impacts subsections of Section V.K, Hydrology and Water Quality, and Section V.L, China Basin Channel Vegetation and Wildlife. Mitigation Measures K.1-K.5 and L.1-L.6, if adopted, would avoid significant project impacts and the project's contribution to cumulative impacts on water quality and fish and wildlife. The feasibility of establishing wetlands at Mission Bay for the purpose of improving water quality and wildlife habitat is addressed on p. V.K.29 of Section V.K, China Basin Channel Vegetation and Wildlife, and further discussed in Hydrology and Water Quality, "Constructed Wetlands" on pp. XII.250-XII.252 of this Comments and Responses document.

#### **Comment**

Again, in its brief discussion of San Francisco's Sustainability Plan, the DEIR nowhere mentions that plan's many policies calling for the vigorous protection and enhancement of biological diversity throughout the City, which the Project's plans to devastate the existing environment of Mission Creek blatantly conflict with. These significant impacts must be fairly and openly admitted and discussed in the final EIR, and mitigation measures to reduce them to levels of insignificance must be adopted prior to any lawful project approval. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

#### **Response**

Loss of the wetlands and other potential effects on Mission Creek vegetation and wildlife are identified in the SEIR as significant impacts; Mitigation Measures L.1-L.6 would avoid the impacts. If adopted and carried out along China Basin Channel, Measure L.1 would protect and restore the

remnant salt marsh wetland. Please also see the response in Mitigation Measures, “Approval and Implementation of Mitigation Measures” on pp. XII.456-XII.457.

### **Request for Overlay Graphics**

#### ***Comments***

[I]f I hadn’t been to the design committee meetings, I wouldn’t know how to interface the current zoning with the proposed zoning, the current land use with the proposed land use, and the current heights, for example, with the proposed heights.

For example, just to discover what the difference in heights from today’s height plan will be, I have to go to Roman numeral V, A-4, a diagram which ought to have an overlay of the existing -- of the proposed zoning. The existing zoning should have a proposed zoning overlay. . .

Likewise, the land use, you have a diagram, very small and very tiny little areas that you can’t discover what is really proposed here, and then there’s no overlay of the proposed on the existing. So I find that a great flaw. (*Mary Anne Miller, San Francisco Tomorrow*)

#### ***Response***

As part of the proposed project, new building height and bulk controls are proposed for the Project Area. These controls differ significantly from the existing controls set forth in the *Mission Bay Plan* and Article 9 of the San Francisco City Planning Code. The comment points out that it is difficult to compare the existing and proposed building height and bulk limits graphics, and suggests that they should be presented in an overlay format (Figure V.A.4, p. V.A.15, and Figure III.B.5, p. III.23).

While both figures have to do with zoning controls regulating building envelopes, the existing and proposed height and bulk figures represent two different ways of indicating information. Figure V.A.4 presents existing Planning Code Height and Bulk Districts, while Figure III.B.5 presents proposed Redevelopment Plan Height Zones. Building height limits, for example, are indicated directly on Figure V.A.4, whereas Height Zones on Figure III.B.5 are indicated symbolically by category. To understand the proposed height and bulk controls, it is necessary to consult the associated Table III.B.2. Overlaying the two figures would not aid in delineating differences or similarities between the two sets of controls because to interpret proposed height, bulk, and coverage limits, it is also necessary to consult Table III.B.2. The two sets of controls are not directly comparable because they represent different approaches to regulating heights. Section V.D, Visual Quality and Urban Design, pp. V.A.16-V.A.20, provides a discussion outlining the differences between the existing and proposed controls.

The comment also suggests that graphics presenting existing and proposed land uses be presented as overlays. Existing land uses in the Project Area and vicinity are presented in Figure V.B.2 and



existing land use districts are presented in Figure V.A.3 on p. V.A.14. The land use program in the proposed Redevelopment Plans is presented in color on the inside of the back cover of the SEIR, and in Figure III.B.3. The proposed land use program and existing land uses differ significantly. To indicate existing land use accurately requires a detailed figure. Proposed land uses, however, are not detailed. Rather, the proposed land use program is based on general land use designations (Figure V.A.6, on p. V.A.30), within which a number of different, specific, land uses could be developed, as described on pp. III.8-III.15. Providing overlays would thus be of limited use in comparing existing and proposed land uses, and could be confusing.

### **Plan Area Boundaries**

#### ***Comment***

**Page V.A.4; Figure V.A.1:** The labeling and/or shading on this map is very misleading. It is unclear whether it is a map of the currently proposed Mission Bay Redevelopment Areas or the 1990 Plan Area. Please revise and clarify. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

#### ***Response***

The comment correctly notes that Figure V.A.1, Plan Area Boundaries, is misleading. The figure was shaded incorrectly. Two unshaded areas, one along Illinois Street (the Esprit site) and the other at Mariposa and Third (the Castle Metals site), should be included in the proposed Mission Bay Redevelopment Areas. Revised Figure V.A.1 is shown on the following page.

### **General Plan Housing Policies**

#### ***Comments***

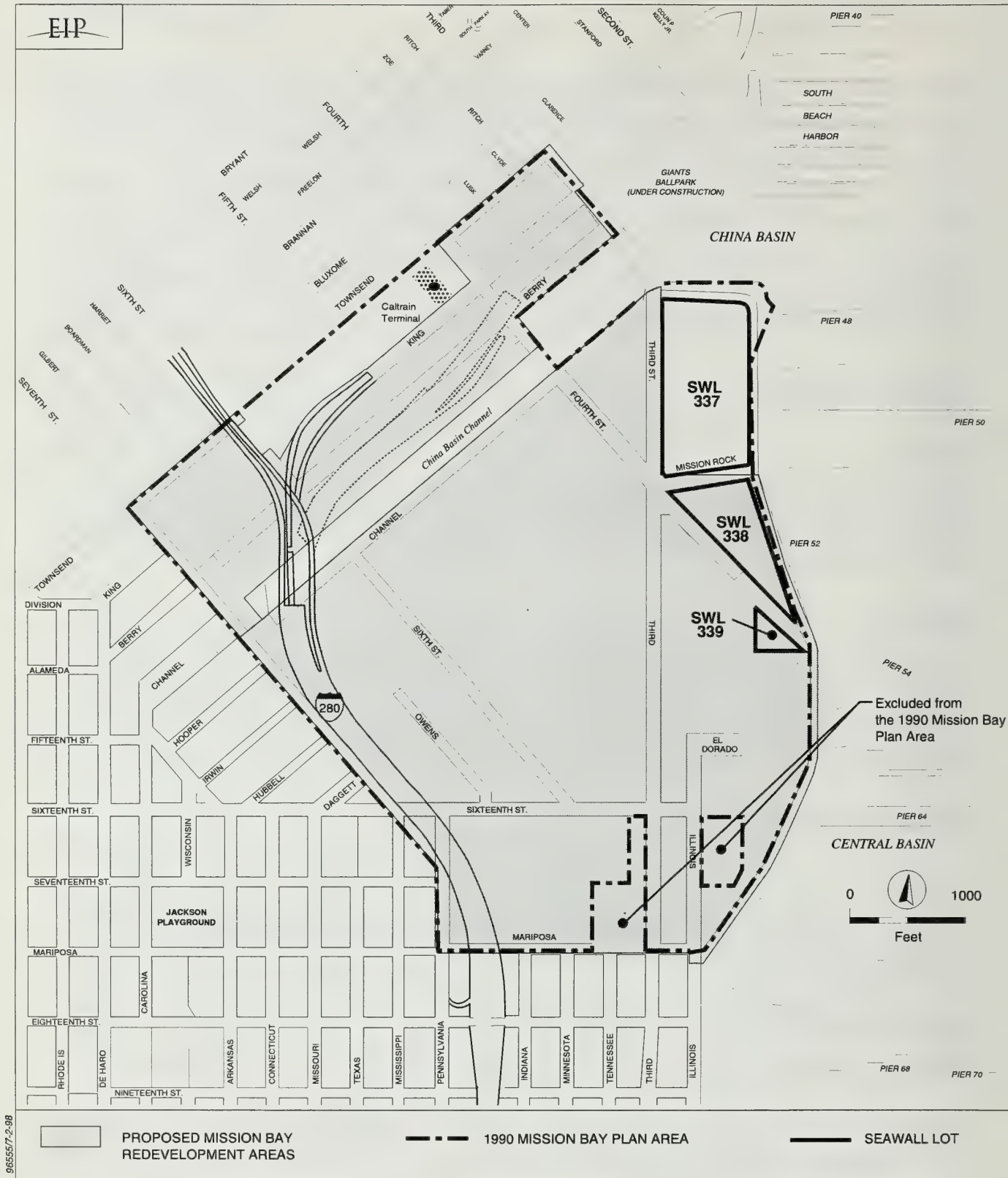
The current DSEIR fails to discuss either these specific Master Plan objectives or policies [Objective 1 and Policies 3 and 7 of the Residence Element] nor the August, 1990 statement of the DCP regarding Mission Bay.

#### **FAILURE TO ADDRESS MASTER PLAN POLICY:**

The Residence Element of San Francisco establishes as its first Objective the following:

*“Objective 1: To provide new housing, especially permanently affordable housing, in appropriate locations which meets identified housing needs and takes into account the demand for affordable housing created by employment growth.”*

It sets out two specific policies to achieve that Objective which are of particular relevance to the proposed Mission Bay project;



965557-2-98

SOURCE: City and County of San Francisco

**MISSION BAY SUBSEQUENT EIR**  
**FIGURE V.A.1 (REVISED) PLAN AREA BOUNDARIES**



*“Policy 3: Create the incentives for the inclusion of housing, including permanently affordable housing in commercial developments;*

*Policy 7: obtain assistance from developers and higher educational institutions in meeting the housing demands they generate, particularly the need for affordable housing for lower income workers and students” . . .*

Amend the DSEIR to include a detailed discussion of the Residence Element of the Master Plan, specifically Objective 1 and Policies 3 and 7. (*Calvin Welch, Council of Community Housing Organizations*)

### ***Response***

The Residence Element of the General Plan is discussed in Section V.A, Plans, Policies, and Permits: Setting. All of the objectives of the Residence Element are listed on p. V.A.11. Further discussion of the Residence Element, and a comparison of the amount of housing designated under the existing *Mission Bay Plan* with the amount of housing in the proposed Redevelopment Plans for Mission Bay North and Mission Bay South can be found on p. V.A.36.

It is unclear whether the comment is citing Objective 1, Policy 3, which states “promote the inclusion of housing in downtown commercial developments” or Objective 5, Policy 3, which states “seek inclusion of low and moderate income units in new housing development.” Objective 1, Policy 3 is not directly applicable to the proposed project, and is therefore not called out specifically. Objective 5, Policy 3 is addressed on p. V.A.37 of the SEIR. It appears that the comment is also referring to Objective 5, Policy 8, which states “ensure that office development and higher educational institutions assist in meeting the housing demand they generate.” As indicated on p. V.A.36, the Redevelopment Agency must follow guidelines established by Community Redevelopment Law pertaining to the provision of affordable housing. Housing demand generated by office development and higher educational institutions has been calculated as part of the overall demand for housing that would be generated by the proposed project.

All nine Residence Element Objectives are cited in the SEIR on p. V.A.11. No substantial conflicts with Residence Element Objectives and Policies are identified in the SEIR. Appendix B, pp. B.1-B.2, lists the relatively minor amendments to the Element necessary to achieve consistency with the project as proposed. CEQA does not require a detailed discussion of General Plan policies in the absence of resulting significant environmental effects. A discussion of specific Residence Element policies requested by the comment would not add to the information available in the SEIR pertaining to environmental effects of the project. As noted on pp. III.46-III.47 of Chapter III, Project Description, the Planning Commission will be required to determine whether the project is consistent with the General Plan as part of the project approval process.

The comment cites an August 1990 Planning Department memo, which contains suggestions on how housing policies should be applied to Mission Bay. While this memo does clarify housing goals for the existing *Mission Bay Plan*, it describes the prior project contemplated under that plan and therefore is not directly relevant to the proposed project. The Mission Bay Plan is proposed to be rescinded and replaced in the General Plan by reference to the proposed Redevelopment Plans for Mission Bay North and Mission Bay South. Redevelopment Plans in general, and the proposed Redevelopment Plans for Mission Bay North and Mission Bay South specifically, contain requirements regarding the provision of housing in the Project Area.

For discussion of housing demand and housing affordability, and issues that pertain thereto, please refer to pp. V.C.30-V.C.40 of Section V.C, Business Activity, Employment, Housing, and Population, and responses in Business Activity, Employment, Housing, and Population, under “San Francisco Affordable Housing Policy Applied to Mission Bay,” pp. XII.56-XII.57 and “Implications of Jobs-Housing Balance Conclusions, on pp. XII.72-XII.73.

#### **Maintain Waterfront Land Use Plan Policies**

##### ***Comment***

Any changes to the Mission Bay Port Land Transfer Agreements (III.43) or Terry François Boulevard (TFB) (V.B.27, VII.2-12), should continue to protect the uses outlined in the Port’s *Waterfront Land Use Plan*, most particularly providing shoreline improvements to support expanded recreational boating and water activities between Pier 50 and S.F. Boatworks, accommodate expanded boat trailer parking areas for the new Pier 52 Public Boat Launch Ramp (see V.B.7, V.M.25), and address the parking needs of recreational boaters in the design of the Mission Bay waterfront open space. (Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club)

##### ***Response***

The City and Catellus are in the process of amending the 1993 Mission Bay Port Land Transfer Agreements. The comment expresses concern that land currently governed by the Port’s *Waterfront Land Use Plan* (WLUP) would be transferred out of the Port’s jurisdiction as part of these amendments and that this land could then be developed in a fashion detrimental to water activities and the needs of recreational boaters. As discussed on p. V.A.23, port lands are state sovereign lands held in trust by the Port for the people of California pursuant to the Burton Act and the related 1968 Transfer Agreement. Any amendments to the 1993 Mission Bay Port Land Transfer Agreements must be approved by the Port Commission and the State Lands Commission. While lands no longer under port ownership would cease to be covered by the WLUP, it is intended that land transferred out of the Port’s jurisdiction would aid in configuring patterns of land ownership along the waterfront into developable parcels including usable open space to accommodate waterfront recreational activities.



The Land Transfer Agreements provide that additional land will be transferred to the Port for development purposes. The Port's WLUP would continue to guide development for all land that remains in the Port's jurisdiction. Land Transfer Agreements are discussed on p. III.43 of Chapter III, Project Description.

The comment indicated particular concern for WLUP policies governing uses between Piers 50 and 52. The comment also correctly cites a WLUP policy which calls for accommodating and expanding boat trailer parking areas in the design of Mission Bay waterfront open space on the west side of Terry A. François Boulevard. For Piers 50 and 52, the WLUP contains policies which would allow the continuation of maritime industrial activities and which would enhance recreational boating and water activities. Because Piers 50 and 52 are outside of the Project Area and are port-owned, they would continue to be under port jurisdiction and the WLUP policies would continue to be the guide for development and use of those piers. The proposed Redevelopment Plans for Mission Bay North and Mission Bay South call for open space across from Pier 52, a land use which would be compatible with current port plans for those facilities. Pier 50 is directly across from Seawall Lot 337, which is port property. As stated in Section V.M, Community Services and Utilities, p. V.M.25, the proposed project would set aside up to one acre of open space for access to and parking for the Pier 52 Public Boat Launch Ramp.

Variant 1, on pp. VII.2-VII.11a of Chapter VII, Variants to the Proposed Project, in the Final SEIR (pp. VII.2-VII.12 in the Draft SEIR) discusses the realignment of Terry A. François Boulevard away from the waterfront, and includes a discussion of land use changes that could result from implementation of this variant. It is noted on p. VII.4 that access to port property under this variant could be made more difficult and that the variant could constrain the Port's ability to implement development goals outlined in the WLUP. However, such potential effects do not constitute a significant impact, and could be minimized by improvement measures designed to maintain viable access to piers. Catellus and the Port are in discussions regarding this variant, including approaches to the issues of access. See also the response in Variants, "Variant 1: Terry A. François Boulevard Variant/Expanded Bayfront Open Space Proposal" on pp. XII.461-XII.466 for an updated discussion of open space and access related to the Terry A. François Variant.

Further discussion of proposed development along the waterfront is found on pp. V.B.26-V.B.28 of Section V.B, Land Use, and in the response in Land Use, "Parking Availability" on pp. XII.54-XII.55.

## Consistency of Project with General Plan

### Comments

We are commenting on this SEIR, however, because it repeats an error that was made in the Hunters Point EIS/EIR. That is, we object to the proposal to amend the *San Francisco General Plan* in order to create consistency with the proposed project. The purposes and functions of State General Planning Law and the *San Francisco General Plan* are defeated by such *post hoc* amendment.

The *San Francisco General Plan* is meant to analyze and provide for citywide development needs. Amending it to meet the needs of this very large project ignores this citywide perspective. The California Supreme Court has described general plans as, “charters for future development, holding that the propriety of virtually any local decision affecting land use and development depends upon consistency with the applicable general plan and its elements.”<sup>1</sup>

Furthermore, CEQA stipulates that an EIR must compare a proposed project with an adopted plan and discuss inconsistencies. The Mission Bay SEIR only states that, “adoption of the Proposed Redevelopment Plan would require that the *San Francisco General Plan* be amended.” It offers suggestions for how the language might be changed, but the EIR does not illuminate the inconsistencies nor analyze their citywide effects. The citizens and decision makers of San Francisco deserve to know how the proposed Mission Bay project will contribute to, or detract from, achieving the goals articulated in the General Plan.

The SEIR should be expanded to include a discussion of how the proposed project deviates from the *San Francisco General Plan*, and how the project needs to be modified to conform -- rather than the other way around. Unavoidable non-conformity with the *San Francisco General Plan* needs to be identified as an impact requiring mitigation.

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<sup>1</sup> Longtin, Supplement to California Land Use, page 107

(Christine Shirley, *Environmental Scientist, Arc Ecology*)

### Response

As part of the project, the *Mission Bay Plan* is proposed to be rescinded and replaced in the General Plan by reference to the proposed Redevelopment Plans for Mission Bay North and Mission Bay South for properties within the Project Area. Adoption of the proposed Redevelopment Plans for Mission Bay North and South and the associated Design for Development documents would also require amendment of a number of other General Plan Elements and Area Plans, as discussed on pp.V.A.33-V.A.37. The comment states that the General Plan should not be amended to conform to the project, rather the project should be amended to conform with the General Plan. The comment is also concerned with the potential impact of the proposed project on city-wide policies.

While the General Plan is the policy document which guides development in San Francisco, it is an evolving document. Policies contained within the General Plan are not absolute or immutable. The



proposed project is in fact a change in the General Plan. The project is a proposed alteration of land use designations and policies presently governing land use in Mission Bay. While the proposed project includes policies that would govern physical development of the Project Area, there are no physical impacts associated with rescission of the 1990 *Mission Bay Plan* or other General Plan amendments which would bring the proposed plan into conformity with the General Plan. Non-conformity with a local policy document is not, per se, a significant impact under CEQA; similarly, amendment of a general plan or similar document is not, by itself, considered to have created a significant impact. However, development activities which could result from implementing the proposed Redevelopment Plans and associated Design for Development documents which do not conform with established environmental standards, for instance criteria for maintaining clean air, would be identified as having significant impacts on the environment. The potential impacts that could be caused by physical development activities which may result from implementation of the proposed project are discussed throughout the SEIR.

General Plan policies proposed to be amended are specific to Mission Bay, and are generally required to provide cross-references to the Redevelopment Plans, rather than altering city-wide policies. Careful consideration has been given to the effects of the underlying changes that would result from the proposed project and whether these changes meet the overall city policies for future needs. In addition, the SEIR discusses the changes in this proposal from the *Mission Bay Plan* adopted in 1990. The Planning Commission, during the approval process, will evaluate whether these future needs are served by the proposed project.

Proposed General Plan amendments are disclosed in detail in Appendix B, Plans, Policies, and Permits.

### **U.S. Coast Guard Permit**

#### ***Comments***

Please revise the phrase beginning the second sentence under U.S. Coast Guard on page V.A.25 to read: "Under Section 9 of the Rivers and Harbors Act of 1899, the Coast Guard has permitting jurisdiction for bridges over navigable waters and regulates the operation of drawbridges." Please also include a sentence at the end of that same paragraph to read "U.S. Coast Guard bridge permits also require the prior approval of BCDC and RWQCB."

Please delete the words ". . .and does not directly issue permits for waterways safety" under U.S. Coast Guard on page V.A.44. Also, please revise the concluding sentence in that paragraph to read "In addition, the Coast Guard reviews U.S. Army Corps of Engineers' Section 404 and Section 10 Public Notices with particular concern for marine safety." (*W.R. Till, Chief, Bridge Section, U.S. Coast Guard*)

**Response**

At the request of the Coast Guard, the following text changes have been made to the last paragraph on p. V.A.25:

**The Coast Guard's primary responsibility is to serve and enhance the navigability and safety of navigable waters of the United States./32/,/33/ Under Section 9 of the Rivers and Harbor Act of 1899, the Coast Guard has permitting jurisdiction for bridges over navigable waters, ~~including certain operational aspects of the existing bridges and any bridges proposed to be built over China Basin Channel~~ and regulates the operation of drawbridges. U.S. Coast Guard bridge permits also require the prior approval of BCDC and RWQCB.**

As requested in the comment, the following text changes have been made to the last paragraph on p. V.A.44:

**The project proposes the construction of a new pedestrian bridge over the Channel. Because the Channel is a navigable waterway, the new bridge must allow passage of vessels. The U.S. Coast Guard has permitting jurisdiction for bridges over navigable waterways and would decide whether or not to issue permits for the construction of any new bridge or alteration of either of the existing bridges over the Channel. The Coast Guard also has authority to require safety measures, such as navigation lights or channel markers, within navigable waterways, ~~but does not directly issue permits for waterway safety. Instead~~ In addition, the Coast Guard ~~participates~~ reviews in the U.S. Army Corps of Engineers' Section 404 and Section 10 Public Notices ~~permit process~~ with particular concern for marine water safety and navigability.**

**Sustainable Advisory Committee****Comment**

Provide a sustainable development advisory committee to work with Catellus and the City on a non-binding basis to identify feasible measures that make good sense environmentally, economically, and socially for the Mission Bay project. (*Janet Jacobs, Project Director, Sustainable San Francisco*)

**Response**

While there is nothing to prevent the City and/or Catellus from establishing such an advisory committee, the EIR does not identify significant impacts that would call for such an action as a mitigation measure.

**NOTES: Plans, Policies, and Permits**

1. The areas covered by the 1990 *Mission Bay Plan* which are not included in the Project Area are proposed to be covered by Mission Bay Guidelines, which will consist of the rescinded *Mission Bay Plan*, readopted as guidelines pertaining to the properties outside of the proposed Mission Bay North and Mission Bay South Redevelopment Plan Areas.



## LAND USE

### Compatibility of Proposed Project

#### *Comments*

After reviewing the redevelopment plan, the EIR, we conclude the following: The acreage is overprogrammed for development; the density and intensity is too much. We would like to see the project scaled down slightly so that the building heights in general are more reflective of other San Francisco development including South of Market and South Beach which are good examples of mixed use, residential, industrial, commercial developments near downtown. We do not believe we need 160-foot towers throughout the south Mission Bay area. Nor do we need the average of 90-foot tall research and development buildings along Third Street, Mariposa Street, or in the vicinity of the waterfront. . However, we really truly believe that it's overprogrammed and we'd like to see it scaled back a little bit. . The traffic congestion that is projected in the DEIR substantiates this problem and can only be mitigated by a reduced program for development. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

The height uses and densities proposal of the project we find to be extreme. They are too high at 160 feet and too dense at 150 units per acre for San Francisco for that area and the available street patterns. Compare this to what is being built elsewhere in San Francisco and their scale. For example, at the corner of South Van Ness and Mission we have a new single story Goodwill store, a new single story carwash, a new single story self-storage. There are many other two-story self-storage businesses south of Market of Potrero Hill. I consider that use fallow for the Central City core. It doesn't seem to follow planning. Fifth and Folsom has [a] new single story commercial building. How can we propose heights and -- how can the proposed heights and densities be justified when we allow self-storage in the City core. I would propose 60 and 75-foot limits as a standard. The popular [live/] work buildings are 50 feet.

Why are we proposing 90 units per acre for affordable housing and 150 units per acre for market rate. Subsidized housing, less dense than the market rates? Why? Why 20-foot exemptions above the height limit for community facilities? Above 90 feet and 160 feet? (*Dick Millet, Member, Potrero Hill Boosters and Merchants Association*)

#### *Response*

The comments raise concerns about the density and scale of the project, compatibility with nearby areas, 160-ft. buildings throughout the Project Area, and 90-ft. buildings in the vicinity of the waterfront.

Project height zones, density, and lot coverage are outlined on pp. III.22-III.29 of Chapter III, Project Description. The total amount of development in the Project Area is limited by the total allowable floor area, as explained in "Limitations on Type, Size, and Height of Buildings" in the Redevelopment Plans, and on pp. III.27-III.28. The building heights, number of towers, and lot coverage present absolute maximums located within each height zone. These maximums could not all be built since the maximums would allow for a development envelope in excess of the total floor area

allowable in Section 304 of the proposed Redevelopment Plans. Thus, following Table III.B.2, a maximum of sixteen 160-ft. towers could be built in Mission Bay South. If the maximum 16 towers were built, then other buildings would be shorter in order to stay within the maximum development allowable. The total allowable floor area, building heights, number of towers, and lot coverage in each height zone permit flexibility in the location of uses while also limiting the amount of development of any one land use or in any one height zone.

The comments express concerns that the proposed development is not reflective of development elsewhere in San Francisco. Density and scale are addressed on pp. V.D.14-V.D.46 in Section V.D, Visual Quality and Urban Design. Consistency with surrounding development is addressed in Section V.B, Land Use, as explained below.

The Land Use analysis compares the project to surrounding neighborhoods, including the South of Market and South Beach areas. The compatibility of Project Area land uses is addressed on pp. V.B.18-V.B.26, and compatibility with general patterns of development in Nearby Areas is addressed on pp. V.B.20-V.B.21. As stated in the SEIR, proposed project land uses are generally compatible with adjacent areas and with the Nearby Areas.

Pages V.B.20-V.B.21 state that the project would “be within a block of existing similar neighborhood-serving retail uses. . .residential development would continue the trend of converting deteriorating industrial areas near the waterfront to new uses, particularly residential.” Page V.B.24, regarding the western portion of the Project Area, states “the new research and development, light manufacturing, office, and retail uses. . .would be adjacent to the I-280 structure. . .across I-280 and Seventh Street. . .are light industrial uses. . .”

As explained above, 160-ft. towers would not be located throughout Mission Bay South. The comment is correct that Height Zone 5 (“in the vicinity of the waterfront”), bounded by Third Street, The Common, and Terry A. François Boulevard, would allow primarily 90-ft.-tall buildings (up to 93% of the land area).

For further information regarding visual quality (i.e., density and scale of the project), see the second response in Visual Quality and Urban Design “Building Heights and Bulk Near Open Spaces” on p. XII.80.

The comments refer to the development of affordable housing units at a maximum density of 90 units/acre and market rate units at a maximum density of 150 units/acre as listed in the Conceptual Plans for Mission Bay North and Mission Bay South. For information on provision of affordable



housing, see the response in Business Activity, Employment, Housing, and Population, “Proposed Mission Bay Affordable Housing Program” on pp. XII.57-XII.65.

In general, affordable housing is less dense than market-rate units due to the type of building superstructure used. Taller, larger buildings require different structural design (framework, foundation, and type of materials) than the typical 5-story affordable housing complex. Also, city policy on affordable housing emphasizes the provision of family units, which are larger than the market rate units contemplated. Thus, it is not unusual that affordable housing would be less dense than market rate housing.

The comments raise concerns about 20-ft. height exemptions for community facilities. As stated in the Design Standards and Guidelines, p. 12, Definition of Terms: Building Height, enclosed rooftop areas used for recreational and community uses would be exempt from the 20-ft. height limits. This decision is within the purview of the Redevelopment Agency. The SEIR analysis accounts for ancillary mechanical devices and exhaust stacks up to 36 ft. high, and therefore, addresses projections within this range above the allowable basic height limitations. Therefore, no text change is necessary.

Commentors’ opinions about the project are best expressed during project approval hearings to be held by the Planning and Redevelopment Agency Commissions and the Board of Supervisors.

### **Active Freight Rail Lines**

#### ***Comment***

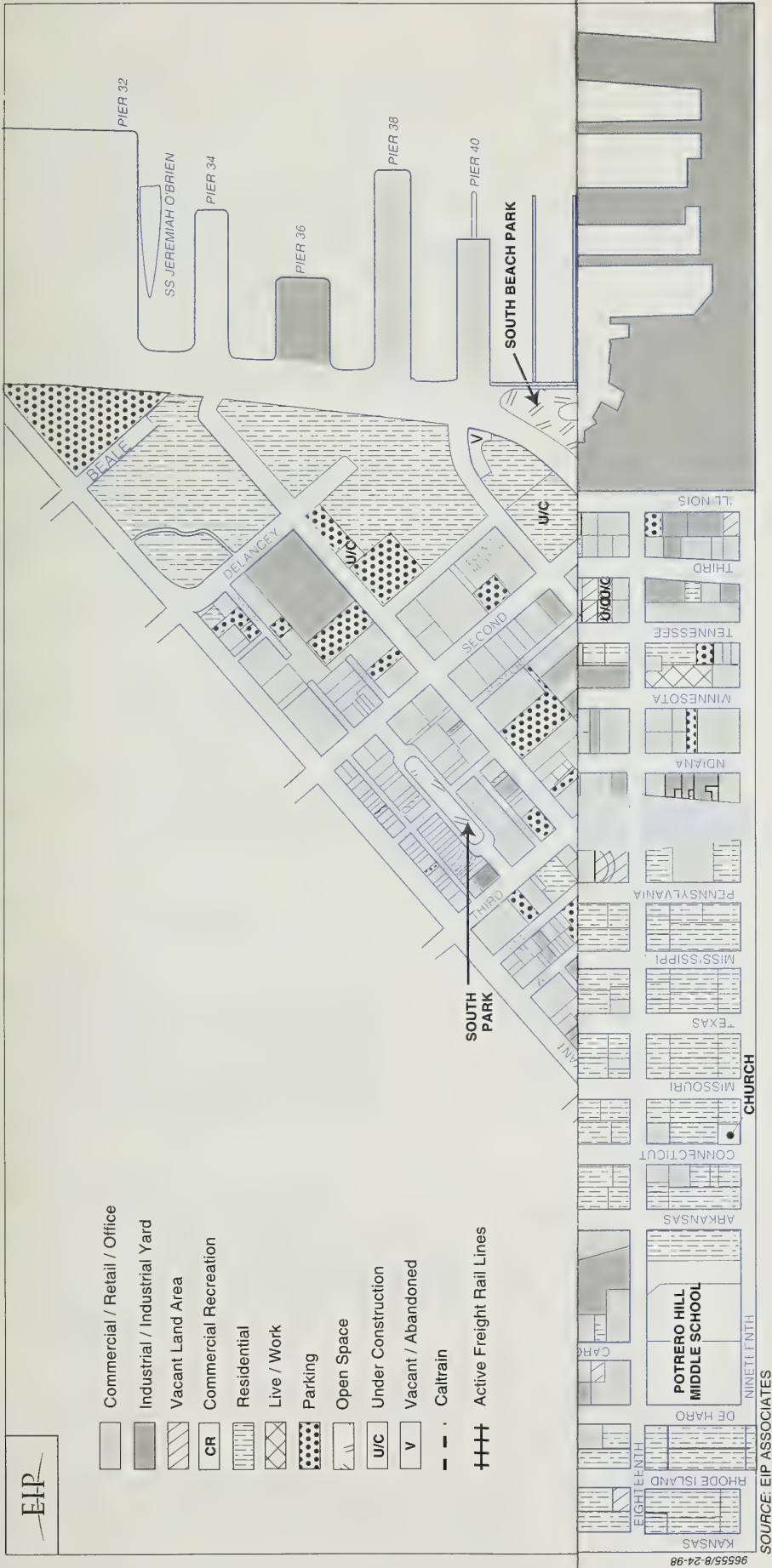
Figure V.B.2: Active railroad right-of-way (the “wye” junction from the Caltrain tracks between Sixteen and Mariposa Streets leading to Illinois Street) is incorrectly marked as having an existing land use of “Parking” or “Vacant.” (*Richard Mlynarik*)

#### ***Response***

Figure V.B.2, Land Use in the Project Area and Vicinity, does not indicate the “y” junction from Seventh Street to Illinois Street (which is correctly indicated on Figure V.E.7). The legend of Figure V.B.2 is amended to include “Active Freight Rail Lines.” The active freight rail lines replace open land area and parking uses extending northeast from I-280 at 17th Street, across 16th Street, through the northwest corner of Third Street and 16th Street, across Third Street, into the Illinois right-of-way north to Mission Rock Street.







MISSION BAY SUBSEQUENT EIR

FIGURE V.B.2 (REVISED) LAND USE IN THE PROJECT AREA AND VICINITY



MISSION HAY SUBSEQUENT IIR

FIGURE V.B.2 (REVISED) LAND USE IN THE PROJECT AREA AND VICINITY



## Land Ownership

### *Comment*

Page V.B.3; top partial paragraph: Please complete the description of land ownership by adding a sentence or two at the end of this paragraph that lists the other landowners. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

### *Response*

The first full sentence in the first partial paragraph on p. V.B.3 has been amended as follows:

**After the transfers, land ownership within the Project Area would be approximately as follows: Catellus would own about 149 ~~151~~ acres; the City about 78 ~~77~~ acres; the Port of San Francisco about 23 ~~24~~ acres; ~~and~~ UCSF about 43 acres; the State of California about an acre; and other private owners about 9 acres.<sup>3/</sup>**

Endnote 3 on p. V.B.31 has been updated to reflect the new information above:

**Eric Harrison, Project Manager, Catellus Development Corporation, personal communication with EIP Associates, August 17, 1998.**

See the response in Project Description, “Land Ownership” on pp. XII.21-XII.22 and Endnote 5, p. III.52, for a listing of landowners.

## Castle Metals Site

### *Comment*

Page V.B.31; Footnote 10: Since this refers to page V.B.6, about the specific warehouse on the 1900 Third Street site, (not the larger “Castle Metals site”), please state in the footnote that the warehouse belongs to the 1900 Third Street LLC. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

### *Response*

The paragraph in question does refer to the buildings on both the Castle Metals site and Catellus property, not just 1900 Third Street, L.L.C.’s property. The “Castle Metals site” naming convention was adopted from the 1990 Mission Bay FEIR. The following text has been added to the end of footnote 10 on p. V.B.31:

**(Note: The large warehouse on the Castle Metals site belongs to 1900 Third Street L.L.C.)**

See the response in Project Description, “Land Ownership” on pp. XII.21-XII.22 and Endnote 5, p. III.52, for a complete listing of other landowners.

### **Mission Creek Harbor Association**

#### ***Comment***

Permits. Note 14 on V.B.7. states that “25 pleasure craft have permits”. This is incorrect. There are 20 houseboat slips and 35 pleasure craft slips, with approximately 45 boats in the 35 pleasure craft slips, as MCHA allows multiple boats in each berth. There are no “permits” required for these boats, other than approval of MCHA. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

#### ***Response***

The Bay Conservation Development Commission permit issued to the Mission Creek Harbor Association/1/ allows berthing facilities for “no more than 35 small boats and 20 houseboats (including live-aboard craft). . .” The Port of San Francisco confirmed that the BCDC permit has not been amended to permit more than 35 small boats. The precise number of pleasure craft does fluctuate. Thus, Endnote 14 on p. V.B.31 is accurate as of the SEIR analysis time period, and is not amended.

### **Parking Availability**

#### ***Comment***

V.B.27 notes that “lack of available parking would make use of existing facilities inconvenient for those arriving by private vehicles.” Lack of parking and access for maritime waterfront users would not just be inconvenient, it would seriously impact the survival of those maritime uses. As mitigation for this impact, we would like to work with the Port and Catellus to determine alternative parking arrangements (possibly on Pier 50 or Pier 54, or, until Mission Bay South is built out, on the West side of TFB on Port land south of Mission Rock Street). (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

#### ***Response***

The comments raise concerns about the lack of parking and access to maritime facilities. As stated on p. V.B.27 of Section V.B, Land Use, the project would remove existing angle/perpendicular parking along Terry A. François Boulevard between Pier 54 and Mariposa Street to create a bayside linear park. Land use impacts on Adjacent Port Property are discussed on pp. V.B.26-V.B.28. Aside from parking for the Public Boat Launch Ramp proposed by the Port at Pier 52, no other parking is proposed as part of the project to serve existing waterfront facilities. The Port may in the future consider the provision of alternative parking arrangements if it determines that additional parking and access is required based on existing and proposed uses of the waterfront. Because various options are



available for alternative access and parking for maritime and other waterfront uses, the potential for displacement of these uses by the project would be limited. Therefore, the potential impact would be less than significant.

See the response in Plans, Policies, and Permits, "Maintain Waterfront Land Use Plan Policies" on pp. XII.44-XII.45 for further information about Adjacent Port Property.

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NOTES: Land Use

1. Bay Conservation and Development Commission, Permit No. 7-76 (Issued July 20, 1976, As Reissued through Amendment No. One) Amendment No. One, July 29, 1986.

## BUSINESS ACTIVITY, EMPLOYMENT, HOUSING, AND POPULATION

### San Francisco Affordable Housing Policy Applied to Mission Bay

#### *Comments*

In August, 1990 the Department of City Planning submitted a memo to the Planning Commission laying out how such a policy should be applied to Mission Bay. That memo set a numerical goal for the project of meeting at least 50% of the housing needs of the San Francisco portions of the projected workforce. . .

The fact that the August, 1990 staff memorandum on meeting 50% of the projected resident workforce housing needs was never mentioned, let alone discussed in the DSEIR also weakens the discussion on existing City policy and fails to inform the current policy makers on practical ways of meeting these important public policies. . .

Include a discussion of the August 1990 memorandum to the San Francisco Planning Commission on the “jobs housing balance” issue in regards to Mission Bay and describe its current status as departmental policy. (*Calvin Welch, Council of Community Housing Organizations*)

#### *Response*

The comments request that a Planning Department memorandum dated August 1990 outlining a jobs/housing policy for Mission Bay be discussed in the SEIR. The comments also request clarification of the current status of that memorandum as city policy.

Consultation with the commentor revealed that the comment is referring to an August 2, 1990 memorandum to the City Planning Commission from Barbara Sahm, Environmental Review Officer and Diane Oshima, Mission Bay EIR Coordinator, providing additional information pertaining to the Mission Bay Plan, including text additions to the responses to comments contained in Volume IV of the Final EIR (the 1990 FEIR). The topics mentioned by this comment are included in those text revisions to the 1990 FEIR response to comments, in response to a specific question about the prior project. As such, they are probably best viewed in that context, rather than as a statement of general Planning Department or city policy. Specifically, the response includes a section entitled “Mission Bay and the Proposed Residence Element’s Goals for Citywide Housing Production.” The memorandum and associated response text do not establish a jobs/housing goal for Mission Bay.

Following extensive discussion in the preceding sections of the 1990 FEIR response about the approach in that FEIR to jobs/housing analysis, how that approach differs from housing needs analysis, how EIR analysis can be used to formulate policy, and about the regional perspective on jobs and housing, the paragraphs added to the response in the 1990 FEIR Response to Comments discuss Mission Bay in light of proposed (at the time) San Francisco Residence Element policies to



reduce commuting by increasing housing production. Those policies were developed in response to the Association of Bay Area Government's regional housing needs analysis calling for new housing to reduce future increases in commuting by 50%. Before presenting a table applying the ABAG housing needs goal to each of the Mission Bay Alternatives and Variants, the response text states: "For analytical purposes, the text below considers Mission Bay in the context of those ABAG jobs/housing policies. However, it should be noted that those policies provide citywide goals that are not intended to be achieved in any individual project." The table (Table XIV.C.1a on p. XV.C.14b of the 1990 FEIR) shows how such a policy could be applied in Mission Bay.

Actual city jobs/housing policy with respect to the 1990 Mission Bay Plan was expressed in a development agreement that was never implemented and is no longer in effect. The Mission Bay Plan to which the August 1990 memorandum referred will be superseded by the current planning efforts for the Project Area.

Pages V.C.34-V.C.36 of Volume I describe the jobs/housing balance analysis for the proposed project using factors reflecting updated assumptions about commute patterns and household size for San Francisco. The analysis indicates how the amount of housing in the proposed project compares to the additional demand for housing in San Francisco associated with Project Area employment growth. The Alternatives analysis in Chapter VIII, particularly pp. VIII.15-VIII.17, VIII.59-VIII.62, and VIII.99-VIII.101, describes the jobs/housing balance for alternative land use and development scenarios for the Project Area. In response to public comments received in this section, "Informational Affordable Housing Analysis" on pp. XII.65-XII.71 provides a comparison of proposed affordable housing in the Project Area to the demand for affordable housing in San Francisco associated with Project Area employment growth.

### **Proposed Mission Bay Affordable Housing Program**

#### ***Comments***

We feel the need to address the social impact of the need for affordable home ownership as allowed under the guidelines of the California Environmental Quality Act. One of the stated goals in the project description section, III.7 of the EIR is affordable housing. We have been meeting with the mayor in his office and with the Catellus Corporation, the developer of Mission Bay, to work with us on increasing the affordable home ownership units in Mission Bay North to 500 units from the present 90 units that will be developed by private developers under the aegis of the City. . . . All we are asking for is 500 units or less than 17 percent of the 3,000 residential units in Mission Bay North to be for-sale affordable units. We even suggest increasing the overall density of the project as needed to obtain this goal. We make our request for more affordable home ownership from our call to see justice done in this City. And for the survival of endangered species in this City, namely the middle-class and working-class man and woman. (*Joe Beresford, Chair, Home Ownership Committee, Bay Area Organizing Committee; and St. Theresa Church*)

We believe that a mixed use development such as the Mission Bay development claims to be, should include the balance of affordable rental, market rate and affordable home ownership units. Under the current plan only 45 of the 3,000 units is slated for affordable home ownership. We don't think this is an adequate number, and the BAOC is working trying to remedy this.

They [Catellus] provided the figures for a two-bedroom unit of \$240,000, which even the mayor proclaimed was good news. We believe this number can be even lower through rethinking the density plan. But working with these numbers that they provided us, we came up with affordability data. And, for example, a family of four in San Francisco making 110 percent of the median income of \$53,000 a year can afford \$200,000 of a mortgage for the affordability gap of only \$4,000. And the same family making 70% of the medium income can afford -- produces an affordability gap of \$40,000. Even with the lower gap based on cost, Catellus refused to work with us towards our goal. We came up with new and alternative source of subsidy including providing a lower interest rate, working with the Mayor's Office of Housing regarding Section AY certificates, and possibility of looking at the proposition money \$15 million set aside for ownership and possible use of pension funds, low income tax credits, and discussions with the various departments. This can make the affordability [gap] for the same family making 110%, zero, and with 70%, dramatically lower than any of us anticipate. Even working with these alternatives and subsidies, Mr. Rising [President of Catellus] still refused to work with us towards our goals. He refused to even negotiate with us. Mr. Chairman, we believe that in order to create a true community, our friends, families and coworkers need a chance to buy a home in the City, to raise their children here, as I hope to one day in our home and in our community. (*Susan Guevara, St. Dominic's Parish and Bay Area Organizing Committee*)

I'd like to speak to the same issue of affordable home ownership units from the viewpoint of a person who has lived almost 30 years on Potrero Hill, we in that community have faced a lot of challenges in the past. It's one of the neighborhoods in the City that has maintained stability, and that stability has come from a sizable portion of people who own their own homes and are willing to invest their time and talent in working for their community. . . But we are concerned about the quality of life. And unless there is a sizable portion of home ownership in Mission Bay, we'll not have that stability in that area. I have watched that area. We have been assigned by the archdiocese of the Catholic Church for those people who have been there, and we have been very interested in the community and we hope you will give special attention to the quality of the environment that will come from having stable home ownership there. So, I thank you today for this opportunity to speak and ask for your support of stable home ownership units in Mission Bay. (*Father Peter Sammon, Pastor, St. Theresa's Church, and Bay Area Organizing Committee*)

A couple of things that just really struck me was that I heard a lot about affordable housing which is not necessarily -- one might not think is part of the DEIR. But it's my understanding if we approved this Draft EIR as it stands, then we will be making -- you know, set -- I think this would be set in stone as far as density and parking, so it could preclude additional affordability. (*Commissioner Mark Dunlop, Redevelopment Agency Commission*)

The other issue is this one of questions around affordable housing. I, too, as the Redevelopment Commissioner stated, would be very fearful and concerned about the EIR casting into concrete some parameters that would prevent over time the possibility of accommodating a greater amount of affordable housing in this project. So I would hope that the EIR is written in a fashion and that the issues are analyzed in a fashion that would permit some flexibility in that area and would urge that the



final EIR be drafted in a fashion to permit that kind of flexibility. (*Commissioner Dennis Antenore, Planning Commission*)

Clearly the proposed Mission Bay development has been offered “incentives” for the inclusion of permanently affordable housing in the development with the City’s willingness to create two redevelopment areas and earmark the tax increment proceeds for use in these areas. While this is referenced in the DSEIR it is not related to the Master Plan requirements and thus has no policy context and actually appears to be some sort of common practice when, in fact, such a development proposal is rather uncommon in San Francisco. What is not discussed at all in the DSEIR is what “assistance” the developers (both Catellus and UCSF) are making in meeting the “housing demands” for “lower income workers and students” as set out in the Master Plan policies. (*Calvin Welch, Council of Community Housing Organizations*)

An imbalance is being thrust upon the City in the area of real estate. . . We, the members of the BAOC, are working in this city, we attend church here, we raise our children here, our children go to school here and they play here. And we desire to own a home here in this very City. And this can only be done if the housing here in San Francisco is affordable for the moderate income family. (*Minister Ingrid Hacket, Bay Area Organizing Committee*)

So basically the Bay Area Organizing Committee would like to see additional affordable home ownership at Mission Bay. I want to let you know a couple of things we don’t want to see changed. We want to see the existing affordable rental housing stay. We don’t want to take existing City resources that are currently going to affordable housing and rob them to create additional affordable home ownership. But we think there’s room in the deal in the area of Catellus’ profits and other sources of subsidy that are as yet untapped to increase the amount of affordable home ownership in the development.

We think that the City and you Commissioners and the public should ask a very basic question: Is this a good deal for the City? . . . How else can you tell? What is Catellus’ upside? If they can prove to us that increasing the amount of subsidy to the purpose of affordable home ownership will kill the deal, we won’t push it. We don’t want to kill the golden goose. But I don’t believe that the Redevelopment Agency with the good sense and negotiating skills that they have didn’t take a look at Catellus’ books at some point. In fact, I don’t think they took a look at them until about 20 months ago. The housing market has gone through the roof since then. The high-rise and retail market is coming back. All we are asking is that Catellus come up to the table and let you, the public you represent, and the Bay Area Organizing Committee, have a look at the books and then decide whether or not we are killing the golden goose. We think we’ve got a couple more eggs that we’d like to use for the public benefit. (*Buck Bagot, Bay Area Organizing Committee*)

And I cannot afford to live here in the City. I can’t afford to buy a home here. My mother could afford to buy a home here; she was a City worker as well. But I was raised here in San Francisco. But I, on the other hand, am not going to be able to do so and neither are any of my co-workers. If we City workers wish to afford a home here, we must find a home outside the City. . . We must stop now and consider the impact before dimming the future of the City to a ghost town. (*Denise Couter Graham, Local 790, Service Employees International*)

And I would like to be able to afford a home. . . (*Jamil Hawkins*)

Commissioners and fellow citizens, it's with deep regret that we in the Bay Area Organizing Committee must try to dissuade you from approval of the Mission Bay Subsequent Environmental Impact Report. Despite stated objectives of affordable housing, there is complete absence of provision for affordable home ownership units on the site. Without affordable ownership driving the market, affordable rentals become fewer and farther between. None of the proposals have addressed the dire need of San Francisco citizenry. We had hoped that 1,000 affordable home ownership units, in addition to the 1700 units for rental, would be afforded by the plan. In San Francisco today a family must earn nearly \$100,000 annual income to qualify for a mortgage on a two-bedroom condo. Only a tiny fraction of potential home buyers in this City earn enough to qualify. Most working families are therefore without hope of ever owning their homes in this City where they work and live.

The result is that more and more of the middle-class are being displaced. Federal Housing Secretary recently [stated] the strong [economy] that has brought prosperity to millions of Americans has not reduced the affordable housing prices for millions of others. The Bay Area Organizing Committee urges the decision-making bodies involved to reject in total the development proposal as well as the current alternatives. For the sake of our committee and our citizenry we urge the planning committee and the Redevelopment Agency, the Board of Supervisors as well as the Mayor's office to make affordable ownership and affordable rental [property] a top priority when endorsing a development plan for our City. A higher percentage of business usage which contributes to the tax increment on this site wouldn't have perhaps been part of an acceptable plan. It is our hope that future SEIRs of Mission Bay will reflect this and, thus, result in a higher percentage of space devoted to serving the affordable housing needs of the public effectively. (*Diane Verze-Reeher, St. Dominic's Church, United Educators, and San Francisco Bay Area Organizing Committee*)

I am also a resident of the Tenderloin, and I have been here for 16 years. And the way I see things is that every year people move out of San Francisco. And the people that move out of San Francisco are the poorest, like me. Because we are not able to buy a house here in the City, I feel like it's a set-up plan. Every year people move out. That means I [will not] be able to buy a house here, and that hurts me a lot. (*Violetta Borjas, Bay Area Organizing Committee and St. Boniface Church*)

What we are asking here today is that you provide affordable housing for the people who work here who love this City who give their life's blood to also live here. . . And we ask that the City -- ask to provide affordable housing for the people who work and give their lives to San Francisco to be able to afford to live here because they give the vast majority of their time to the City and County of San Francisco. And SEI sincerely hopes that you will do everything within your power to provide affordable housing for the employees that work here. (*Luanna Preston, Treasurer, Joint Council No. 2, Service Employees International Union; and Bay Area Organizing Committee*)

We firmly believe that affordable housing is an issue that needs to be addressed for the well-being of many San Franciscans. We are asking that you help provide a sense of initiative and responsibility that helps guarantee the rights of all San Franciscans, and allow those seeking affordable home ownership the means to reach their fulfillment. (*Maria Quintanilla, St. Dominic's Church and Bay Area Organizing Committee*)

Certainly there's a need for affordable housing here because the main reason for those persons going that far has to do with the fact that they wanted to buy a home and could not afford them here in the San Francisco area. It's not often that we have a project such as the one that's going up in Mission Bay. What a great and golden opportunity for us to show to the person who work these jobs and who



you might consider them medium income an opportunity to buy a home and to live near where they work. . . We would ask that you would consider that this project is going to be a large -- perhaps one of the largest building projects to go up in some time, and give a great consideration for the person who has less income. (*Reverend Floyd Trammell, Pastor, St. Luke's CME Church*)

Mission Bay cannot solve all of the City's problems, but they can set aside and address different priorities that we have as residents, as voters, as policy makers in this City. . . I'm asking you to not let this opportunity go by to not also include affordable home ownership as a real possibility for people in San Francisco. (*Patti Tamura, Local 790, Service Employees International Union, and Bay Area Organizing Committee*)

And I would like to someday be able to afford to buy a house. I'm a painter/plasterer, I work day and night to pay rent. And I just wanted to state that. (*Ed Williams, Bay Area Organizing Committee and St. Dominic's Parish*)

And I start working and I had to send my children back to my home in Argentina because I didn't have affordable housing or affordable time. . . I don't like to see San Francisco to send its people to the lions of poverty, to the lions of homelessness, because that has an environmental impact. We are making pollution of people, disposable people, in the dark corner of the City of San Francisco. That is terrible and sad. . . Don't kill the tree of hope for these people. Give them affordable housing, affordable nest. (*Dr. Maria Christina Bosaric Salem, St. Dominic's Church and Bay Area Organizing Committee*)

As you can gather from our speakers and our witnesses today, we are appalled by the forced mass exodus from this City of its working-class, the people who built this City, their City. . . Our urgency is more pronounced, as the Mission Bay project is possibly the last large redevelopment project here in our City. . . You heard our desire for 500 affordable home ownership units in the Mission Bay project. You have heard a call for stability and ownership in Mission Bay. You have heard the call of City workers who want to live in San Francisco and be homeowners. (*Sister Kathleen Healy, Associate Pastor, St. Theresa's Catholic Church and Bay Area Organizing Committee*)

And I tell you what you could do, too, maybe to get affordable housing, instead of a 30-year mortgage, somebody could decide to operate a 40- or a 50-year mortgage and maybe the churches could do good then and so forth and so on. (*Enola Maxwell*)

Housing has been mentioned. I'm certain that you see the outflux of people who live in the City. I have heard a lot about that this evening. So I ask you to take a serious look and take that under consideration. (*Comer Marshall, Executive Director, Urban Economic Development Corporation*)

Also, affordable housing. I think the City already sets an affordable housing standard of 20%. I know that most of the new developments in the South Beach-Rincon Point development area have included 20% in their developments. It would be sad for San Francisco not to include that in Mission Bay. This is a diverse city, let's keep it that way. (*Jeffrey Leibovitz*)

Over 30% of San Franciscans do not drive cars. When you do not make off-street parking for residential units, you reduce the cost of those units. You make them more affordable. And in fact, instead of 10% of San Franciscans who can afford to buy units with off-street parking, dedicated off-street parking, 25% of San Franciscans can buy off-street parking. I'm told -- I believe this is a

planning department study when there is no dedicated off-street parking. So that's something to look at and connects both transportation and the desire to have more affordable housing in this plan. (*Jon Rainwater, San Francisco League of Conservation Voters*)

As an active realtor with 21 years experience in the San Francisco residential market, I assure you there is a desperate need for real rental housing, not condos disguised as rentals. Also, there is an overwhelming availability of luxury housing. What we need again desperately is affordable housing for ownership. We are already too close to being a City of rich and homeless. (*Ellen Kernaghan*)

Comment #4: Require additional Homeownership at Mission Bay. . . We believe that Mission Bay should reflect at least the level of affordable homeownership contained in recently approved Proposition A. Prop A provides \$100 million for affordable housing, with 15% set aside for affordable homeownership. We do not oppose the affordable rental housing contained in the Agreement—we support it whole-heartedly. We do not call for replacing this affordable rental housing with affordable homeownership—we want additional ownership units. We do not want to see the City's existing affordable housing funds cannibalized to pay for this ownership housing. We believe that the City and Catellus can generate subsidy funds required from new sources, both public and private. Other possibilities for subsidy are available, and neither Catellus nor the City has explored them fully. We believe that Catellus and the profits they plan to generate from Mission Bay could remain one potential and important source of this new subsidy. Catellus has committed to a sizeable contribution toward the public benefit in the Agreement. Can they afford more? We don't know—but we believe that the BAOC, the City and the public should find out. How else can we decide if the City has made a good and fair deal with Catellus? In return for the City's approval for development, Catellus is offering contributions to the public good. Have they offered enough? We won't know, unless BAOC, the City and the public have the opportunity to analyze Catellus' potential profits, quantify them and compare them to the value of the contribution Catellus has proposed. That's the only way to know if this Agreement is a good and fair deal for the City. In any case, BAOC has no interest in making the development impossible for Catellus, or pushing them out. If Catellus can prove to BAOC, the City and the public that they cannot afford any additional contribution to the public good, we will expect no more. (*Joe Beresford, Chair, Homeownership Committee, Bay Area Organizing Committee; and St. Theresa's Church*)

### ***Response***

Generally, the comments express concern about the affordable housing program proposed for the Project Area. Some of the comments specifically express the need for more affordable for-sale housing in Mission Bay. Others, more generally, are concerned that the analysis in the SEIR constrains future options regarding the affordability of housing and housing density.

First, the SEIR covers a range of options with respect to housing affordability and housing density. The SEIR does not “set in stone” any specific decisions related to housing affordability or to the mix of rental and for-sale housing. Decision-makers retain the flexibility to alter the mix of housing types as planning goals related to affordable housing production may change over time. (In fact, as explained below, this is envisioned as part of the longer-term planning and development process for Mission Bay.) Future decisions about the mix of types of units and the affordability of units would



not invalidate the analysis of physical environmental effects in the SEIR. The affordability and rental or ownership characteristics of housing units is a policy issue of great concern, but does not substantially alter the level of activity or range of physical impacts associated with the units.

Second, the issue of whether the project should contain additional housing units that would be for sale and affordable, and whether Catellus's potential profits could subsidize such additional housing, is not a CEQA issue involving physical environmental effects. The mix of rental and for-sale housing is immaterial to the physical environmental impact analysis in the SEIR. This concern of the comment is best expressed during project approval hearings, including those held by the Planning and Redevelopment Commissions and Board of Supervisors.

Any material change in the land use program differing from the project or alternatives analyzed in the SEIR, such as adding a substantial number of housing units, would require a determination whether new significant impacts would occur. The impact analysis in the SEIR would likely cover moderate changes in housing density in areas designated for residential development. Major increases in the density of development and, particularly, material changes in the locations proposed for residential development would likely not be covered by the impact analysis in the SEIR.

The SEIR generally describes a proposed housing program for the Project Area on pp. V.C.30 and V.C.31. This description is derived from the *Conceptual Framework for a Proposal for the North of Channel Redevelopment Plan Area* (September 26, 1996), and *Conceptual Framework for a Proposal for the Catellus Development Portion of the South of Channel Redevelopment Plan Area* (July 2, 1997), and in the Draft Redevelopment Plan for the Mission Bay North Redevelopment Project (March 30, 1998) and the Draft Redevelopment Plan for the Mission Bay South Redevelopment Project (March 30, 1998). The proposed program has not changed in the intervening months. For informational purposes and to clarify the current proposal for commentors, more detail is presented below on the affordability of housing proposed for the Project Area (as outlined in the documents mentioned above). The following description may be subject to some minor changes but is expected to remain substantially the same.

In Mission Bay North, a total of approximately 3,000 housing units are proposed. Catellus would develop 2,655 of those units (2,400 market-rate units and 255 affordable units). Catellus would donate land to the San Francisco Redevelopment Agency for the development of more affordable units. The Redevelopment Agency would sponsor housing developers to produce approximately 345 units of affordable housing. Overall, in the Mission Bay North Project Area, 600, or 20%, of the units would be affordable units. (See *Conceptual Framework for a Proposal for the North of Channel Redevelopment Plan Area*, September 26, 1996, pp. 1-4.)

In Mission Bay South, a total of approximately 3,090 housing units are proposed. Catellus would develop 1,900 units and would donate 42% of the land for housing to the Redevelopment Agency (for agency-sponsored affordable housing development) that would accommodate approximately 1,100 affordable housing units. Ninety housing units are proposed on other land in private ownership in the Project Area but not owned by Catellus. (See *Conceptual Framework for a Proposal for the Catellus Development Portion of the South of Channel Redevelopment Plan Area*, July 2, 1997, pp. 1-4.) Overall, in the Mission Bay South Project Area, 36% of the units would be affordable units. For both Project Areas considered together, 28% of the housing is proposed to be affordable housing.

A potential mix of affordability levels is outlined in the *Conceptual Framework* documents and in the draft Redevelopment Plans. (See *Conceptual Framework for a Proposal for the North of Channel Redevelopment Plan Area*, p. 2; *Conceptual Framework for a Proposal for the Catellus Development Portion of the South of Channel Redevelopment Plan Area*, p. 4; Draft Redevelopment Plan for the Mission Bay North Redevelopment Project, March 30, 1998, pp. 24-25; and Draft Redevelopment Plan for the Mission Bay South Redevelopment Project, March 30, 1998, pp. 31-32). Approximately forty percent (40%) of the Catellus-developed affordable units in Mission Bay North would be affordable to very-low-income households. Approximately fourteen percent (14%) of the Catellus-developed affordable units in Mission Bay North would be affordable to low-income households, and approximately 46% would be affordable to moderate-income households. The mix of the Redevelopment Agency-sponsored affordable units would be determined by the Redevelopment Agency and the Mayor's Office of Housing closer to the time of development as part of San Francisco's Consolidated Plan annual housing action plan process. The mix would be determined considering the Mission Bay sites, the level of funding available from the tax increment in the Project Area, and what is most appropriate given San Francisco's housing needs at that time. It is expected that most of the Redevelopment Agency-sponsored affordable units in both Mission Bay North and Mission Bay South would be affordable to very-low-income households.

It is expected that the affordable housing developed in Mission Bay would generally exceed the affordability requirements specified for redevelopment project areas in California's Community Redevelopment Law. Section 33413(b) sets out the affordability requirements. There are two independent sets of requirements. The first applies to units developed by an agency and the second applies to units developed in a project area under the jurisdiction of an agency by public or private entities other than the agency. The first requirement is that at least 30% of all units developed by an agency shall be affordable to low- and moderate-income households. At least 50% of those are to be affordable to very-low-income households. The second requirement is that at least 15% of all units developed in the project area by others under the jurisdiction of the agency (but not by the agency



directly) shall be affordable to low- and moderate-income households. At least 40% of those units are to be affordable to very-low-income households.

The mix of Catellus's rental and for-sale units is at the discretion of Catellus; however, it is expected that most of the Catellus-developed affordable units in Mission Bay North would be rental units. For the Redevelopment Agency-sponsored units, the mix of rental and for-sale units would be subject to the discretion of the Redevelopment Agency and would most likely be determined as part of the annual housing action planning process described above.

Regarding UCSF, the UCSF 1996 Long Range Development Plan (LRDP) identified a goal for developing housing to meet demand from students, junior faculty, and junior staff, especially for housing that is affordable. As discussed on p. V.C.35, the LRDP Goals and Objectives provide that UCSF would work closely with the community to develop housing in the Bay Area for between 20% and 25% of UCSF's total net new employees in categories that are eligible for affordable housing. This would involve development of approximately 325-470 new affordable housing units for students and staff during the LRDP planning period. The Final EIR for the LRDP found that the effect of housing demand from UCSF development would be less than significant and could be met by projected housing supply increases in the region. UCSF retains these goals and will continue to study housing impacts and potential development as it implements the LRDP.

### **Informational Affordable Housing Analysis**

#### ***Comments***

#### **FAILURE TO ANALYZE AFFORDABLE HOUSING IMPACT OF THE PROJECT**

The DSEIR is additionally insufficient in its failure to analyze the environmental impacts of the failure of the project to meet these policies. The DSEIR totally ignores the existence of an affordable housing crisis in San Francisco. The DSEIR fails to include an analysis of the income level of the projected workforce, where the San Francisco portion of that workforce might reasonably be expected to fall in that overall income distribution and what level of affordability it would take to house the San Francisco portion of the projected workforce. Moreover, the DSEIR fails to analyze the existence of the City's Consolidated Plan for Affordable Housing and its projected production goals, pointing out where there may be problems and inconsistencies between demand generated by the projected Mission Bay workforce needs for affordable housing and the ability of the City to meet that demand. The consequences on surrounding neighborhoods of the failure to house the San Francisco portion of the Mission Bay workforce on site is also ignored as is its transit and transportation impacts for that workforce which would be forced to commute to and from its place of employment in the project area. . .

. . . [W]hile the DSEIR cites, in a footnote, the existence of an extensive study on the projected income of various workers across a wide spectrum of commercial activity and the projected housing

demands they may be expected to generate there is no detailed discussion of the 1997 “Jobs Housing Nexus Analysis” by Keyser Marston. This failure is simply astounding. . .

Include an updated version of Table XIV.C 17 from the 1990 FEIR on Mission Bay and discuss the projected San Francisco portion of the net new Mission Bay workforce affordable housing demand.

Incorporate the findings of the 1997 Keyser Marston “nexus” study and discuss its implications on the project area and the City.

Include a discussion of the City’s “Consolidated Plan for Affordable Housing” and discuss the impact of an additional need for 3,700 affordable units caused by the failure of the proposed project to supply them for the projected workforce. (*Calvin Welch, Council of Community Housing Organizations*)

Expand the Economic and Social Information Included in the SEIR to Include the Need for Affordable Homeownership. . . Put simply, we believe that the SEIR should have examined more closely the “social impacts” of the Mission Bay development, and not limited itself so narrowly to the environmental impacts. As we understand it, economic or social information may be included in an EIR or may be presented in whatever form the City desires. We believe that the SEIR should examine the need for affordable homeownership as part of its examination of the jobs/housing balance. The survival of stable communities in San Francisco depends on a mix of affordable rental and ownership housing. The SEIR should examine the impact of the lack of sufficient affordable homeownership at Mission Bay. (*Joe Beresford, Chair, Homeownership Committee, Bay Area Organizing Committee; and St. Theresa’s Church*)

### **Response**

The comments state that the SEIR ignores issues of affordable housing demand and supply associated with the proposed Mission Bay development and implications for transportation impacts. The comments request more analysis of affordable housing in the SEIR.

The SEIR does discuss the proposed affordable housing production for the Project Area. Pages V.C.30-V.C.32 describe the proposed housing program: total number of market rate and affordable units and the likely characteristics of the market-rate and affordable units. Page V.C.36 describes the housing market impacts of the supply shortfall in the Project Area, pointing out that most of the impacts would be concentrated in areas near the Project Area, and also discusses the implications for low- and moderate-income households of the affordable housing proposed for the Project Area. As described below in the response to a related comment regarding “Implications of Jobs-Housing Balance Conclusions” on pp. XII.72-XII.73, the SEIR also discusses the traffic and transportation impacts of the commute patterns that result from the shortfall of housing supply in the Project Area compared to housing demand in San Francisco associated with Project Area employment growth.

The report by Keyser Marston Associates, Inc., *Jobs Housing Nexus Analysis, City of San Francisco*, dated July 1997, appears as more than just a footnote reference in the EIR. As described in the SEIR



on p. V.C.34 and in more detail in the Appendix, pp. C.7-C.8, the jobs/housing balance analysis is based on the updated housing demand factors documented in that report, and uses these factors to determine San Francisco housing demand associated with Project Area employment growth.

It is important to recognize that the jobs/housing analysis factors developed and documented in the *Jobs Housing Nexus Analysis* and used in the Mission Bay EIR do not reflect adopted city policy. Current city policy with respect to jobs/housing balance requirements remains the Office Affordable Housing Production Program (OAHPP) originally adopted in 1985 as Section 313 of the City Planning Code and amended in 1990. The OAHPP establishes the relationship between office employment growth and affordable housing demand in San Francisco and sets requirements for housing production or the payment of an in-lieu fee. The OAHPP applies only to net additional office space in projects over 25,000 square feet throughout the City. Development in Redevelopment Project Areas is exempt, as is development by state agencies such as the University of California. Although these exemptions and application of the OAHPP requirements to a broader range of economic activities and types of development have been considered in the update analysis, to date, the City has not set a new policy direction.

While the comment is correct that EIRs may include social and economic information, inclusion of these topics is not a requirement of state or local law. Thus an extensive discussion or analysis of the income distribution of persons requiring housing, and an analysis of the merits or desirability of ownership or rental units, is not required in the SEIR.

Nonetheless, in response to the comments, and for informational and planning purposes, the discussion below expands on the jobs/housing analysis presented in the SEIR to include consideration of housing affordability (both the household incomes of Project Area workers and the price/rent levels of Project Area housing). Affordable housing requirements of the proposed project would meet or exceed requirements specified in California Community Redevelopment Law [Section 33413(b)] and are reflected in the agreements outlined in the Conceptual Frameworks and the Draft Redevelopment Plans. In brief, California Community Redevelopment Law requires that at least 15% of the units within a project area developed by public or private entities or persons other than the redevelopment agency be affordable to low- and moderate-income households and that at least 40% of those units be affordable to very-low-income households. Subsequent planning for the Redevelopment Agency-sponsored units would be done by the Agency and the Mayor's Office of Housing considering the housing needs at the time as reflected in the City's Consolidated Plan for Affordable Housing.

If, instead of the above requirements, the current OAHPP formula were applied to Mission Bay Office development, then the requirement for affordable housing production would be about 665 units (see Table XII.2). The proposed project's 1,700 affordable units are 2.5 times more than the OAHPP requirement. This analysis assumes (consistent with other SEIR analyses) that 50% of the Commercial Industrial development in Mission Bay would be developed as office space. It also applies the current OAHPP housing production formula as specified in the OAHPP ordinance and as applied in the 1990 FEIR. According to that formula, 62% of the total housing unit demand associated with proposed office development would be units affordable to low-and moderate-income households.

If updated housing demand factors were applied to all Mission Bay non-residential development, including UCSF, then the resultant demands would be greater than under the current OAHPP. (For the purpose of these calculations, UCSF expansion in Mission Bay is treated as medical-related space. This is one of the additional building types/land uses considered in the 1997 *Jobs Housing Nexus Study*.) Using these factors, total affordable housing demand in San Francisco associated with Project Area employment growth is calculated at 4,473 units; about 1,232 of the units are attributable to UCSF. Total affordable units proposed for the Project Area represent about 40% of that demand. The proposed project's units affordable to very-low-income households are 75% of the demand calculated for that category. The proposed project's supply percentages are less than 40% of the housing demand in San Francisco in the other affordable housing categories, i.e., low-and moderate-income households (see Table XII.2).

The above analysis is a direct extension of the jobs/housing analysis presented in Appendix Table C.8 on p. C.8 in the SEIR and discussed on pp. V.C.34-V.C.36. It also provides the information requested by the comment and is largely equivalent to the housing affordability analysis presented in the 1990 FEIR and Table XIV.C.17 in the 1990 FEIR. That table provides estimates of the household income distributions for San Francisco households associated with Project Area workers. Comparable updated estimates of income distributions are provided in the 1997 *Jobs Housing Nexus Study*. (See Keyser Marston Associates, Inc., and Garbriel Roche Inc., *Jobs Housing Nexus Study*, July 1997, pp. 19-20, p. 32, and Appendix E.) The updated housing demand factors used to calculate the above estimates of demand by household income category incorporate those income distribution assumptions.

If the employment associated with the UCSF site in Mission Bay is excluded from the housing demand calculations, there would be less of a gap between supply and demand. As indicated in the response regarding "Proposed Mission Bay Affordable Housing Program" on pp. XII.57-XII.65, the Goals and Objectives in UCSF's Long Range Development Plan provide that UCSF would work closely



with the community to develop housing in the Bay Area for between 20% and 25% of UCSF's total net new employees in categories that are eligible for affordable housing.

Because the current project differs significantly from the proposals analyzed in the 1990 FEIR and adopted by the City in 1991, current and prior projects are not directly comparable nor best understood in chart format. For example, the prior proposal contained a different definition of affordability, different amounts of total and developable acreage, and did not include development of a UCSF campus on 43 acres. However, in response to the comments and for comparative informational purposes, Table XII.2 also shows the 1990 FEIR analysis of the proposed 1990 *Mission Bay Plan*—the Development Agreement Application variant in the 1990 FEIR and the 1991 Development Agreement Housing Program. Under the Variant, no housing affordable to very-low-income households was proposed, and the numbers of units affordable to low-income and moderate-income households were not specified. Overall, the calculations presented in the 1990 FEIR (and reproduced in Table XII.2) show that the proposed affordable housing supply would exceed demand in San Francisco associated with project area employment growth in the low- and moderate-income household categories, but would not meet any of the very-low-income demand.

The housing program ultimately approved for Mission Bay and specified in the 1991 Development Agreement called for more affordable units and a different distribution by income category than described in the Development Agreement Application variant. Table XII.2 shows the number and distribution of affordable units for the very low (below 50% of median income), low (averaging 75% of median income) and moderate (averaging 100% of median income) categories specified in the adopted Development Agreement.<sup>1/</sup> The total number of affordable units defined at that time in the Development Agreement also included units affordable to households with incomes averaging 120% of median income. Those households are not included in the affordability definitions used above so they are not counted as affordable units for the purposes of this analysis.

The affordable housing demand associated with Project Area employment growth would be the same as calculated for the Development Agreement Application variant since the adopted Development Agreement did not change the amount or type of non-residential development allowed under the Plan. The adopted changes to the housing program result in housing supply under the approved 1991 Mission Bay Plan and development agreement that would exceed demand in the very-low and low-income categories.

**TABLE XII.2**  
**INFORMATIONAL HOUSING DEMAND ANALYSIS**

|   | Type of Affordable Units /a/ |                      |                   |  | Total Affordable Units |
|---|------------------------------|----------------------|-------------------|--|------------------------|
|   | Very Low Income              | Low Income           | Moderate Income   |  |                        |
| Proposed Project's Housing Development /b/<br>Affordable Housing Policy Scenario  | 680                          | 238                  | 782               |  | 1,700                  |
| 1. OAHPP - Office Space Only /c/<br>% Demand Met by Project:  | NA<br>NA                     | NA<br>NA             | NA<br>NA          |  | 665<br>256%            |
| 2. Updated OAHPP - All Non-Residential Space /d/<br>% Demand Met by Project:  | 902<br>75%                   | 1,474<br>16%         | 2,097<br>37%      |  | 4,473<br>38%           |
| 3. 1990 FEIR Affordable Housing Analysis /e/<br>1990 Development Agreement Application Housing<br>Development /f/<br>Demand by Income Category for 1990 /g/<br>% Demand met by 1990 Development Agreement Application | 0                            | NA                   | NA                |  | 3,000                  |
| 4. 1990 Mission Bay Plan Affordable Housing Analysis/h/<br>1991 Development Agreement Housing Program /i/<br>Demand by Income Category /j/<br>%Demand met by 1991 Housing Program                                     | 1,050<br>626<br>168%         | 1,200<br>970<br>124% | 400<br>647<br>62% |  | 2,650<br>2,243<br>118% |

*Notes:*

- a. Very Low Income units are affordable to households earning up to 50% of the area's median income; Low Income units are affordable to households earning between 51% to 80% of the area's median income; Moderate Income units are affordable to households earning between 81% and 100% of the area's median income.
- b. Catellus Development Corporation, *Conceptual Framework for a Proposal for the North of Channel Redevelopment Plan Area*, September 26, 1996, page 2; and San Francisco Redevelopment Agency, "Draft Redevelopment Plan for the Mission Bay North Redevelopment Project Area", March 30, 1998, page 24; San Francisco Redevelopment Agency, "Draft Redevelopment Plan for the Mission Bay South Redevelopment Project Area", March 30, 1998, page 31; and Olson Lee, San Francisco Redevelopment Agency, telephone conversation with Hausrath Economics Group, June 24, 1998. In lieu of more specific information on the distribution of agency-sponsored affordable units by income category, the same distribution is assumed for agency-sponsored units as specified for Catellus affordable units in Mission Bay North.



**TABLE XII.2 (CONTINUED)**

- |    |  |
|----|--|
| c. | OAHP stands for San Francisco's Office Affordable Housing Production Program, Board of Supervisors Ordinance No. 120-96, as amended 3/7/96, page 21. Commercial Industrial development assumed to be 50% office space and 50% research & development and light industrial space. Formula applied to 2,778,500 gsf of office space.   |
| d. | Refers to use of the OAHPP formula updated for current demand factors as developed in Keyser Marston Associates, Inc. and Gabriel Roche Inc., <i>Jobs Housing Nexus Analysis</i> , City of San Francisco, July 7, 1997, Table 7, and the number of units in the other categories was not specified. Formula applies to 2,778,500 gsf of Office space, 2,778,500 gsf of R&D space, 2,650,000 gsf of Medical space, 1,507,000 gsf of Retail space, and 400,000 gsf of Hotel space. For the purpose of these calculations, UCSF expansion in Mission Bay is treated as medical space. |
| e. | This comparative presentation of the analysis for the 1990 <i>Mission Bay Plan</i> is based on the 1990 FEIR analysis of the Development Agreement Application, Variant 12. See 1990 FEIR, pp. VII.84-VII.108.   |
| f. | In the 1990 FEIR analysis of Variant 12, The Development Agreement Application, affordable housing was assumed to be priced to be affordable to households with incomes ranging from 50-120% of median household income. No units for very low income households were proposed.  |
| g. | Calculated according to the jobs-housing analysis in the 1990 FEIR. See 1990 FEIR, Volume III, pp. XIV.C.29-XIV.C.37 for background and Volume II, pp. VII.95-VII.97 for discussion of Variant 12, the Development Agreement Application. See especially Endnote 32 on p. VII.114.   |
| h. | The Mission Bay Development Agreement approved in 1991 included a detailed housing program with a substantial number of units affordable to very-low-income households. For informational purposes, the comparison of affordable housing demand to affordable housing supply for that housing program is included in this table.   |
| i. | 1991 Mission Bay Development Agreement, Exhibit A-1, <i>Housing Program</i> , Section 6, Pricing of Affordable Units, page A1-12. Units affordable to households averaging 120% of median income are not counted in the affordable supply for this table because they are not included in the current affordability definitions, see Note /a/, above.  |
| j. | Demand is the same as calculated in the 1990 FEIR for the Development Agreement Application because the 1991 Development Agreement did not change the amount or type of non-residential development that could be accommodated under the 1990 <i>Mission Bay Plan</i> .  |

## Implications of Jobs-Housing Balance Conclusions

### Comments

The jobs-to-housing ratio is detrimental to the future quality of life within the Mission Bay project and the greater Bay Area. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

The DSEIR fails to analyze the dimension, consequences and possible mitigation measures which could avoid or lessen the impacts of an imbalance between the demand generated for affordable housing by the projected workforce of the development and the failure of the project sponsors to supply that housing. Because of this failure of analysis possible measures which could be adopted by either the Redevelopment and/or the Planning Commission were not discussed. . . Most significantly it fails to discuss the traffic, transit, and air quality impacts of that failure to meet that housing demand either in the project area itself or on the adjacent neighborhoods. Include a discussion of the impacts of the failure of the project to meet the housing demands of its projected workforce on transit, traffic and air quality for the project. . .

Include a discussion of the possible mitigation measures necessary for meeting the 3,700 unit shortfall . . . in the project area itself and second, off site. Are there locations in the proposed project areas which can accommodate all or part of this housing shortfall? What would be the estimated cost of meeting that shortfall, on site and off site and who would pay? (*Calvin Welch, Council of Community Housing Organizations*)

This document shows a project at buildout that is seriously deficient in providing housing for its workers. A deficit of 3,648 units in a chronically tight housing market is unacceptable. Such a deficit also increases the impacts of the project on transportation and air quality in the Bay Area. In addition, availability and affordability of housing is a key component in the decision of businesses to locate outside of San Francisco. This project in its current form only exacerbates that problem.

The best way to mitigate this impact is to increase the housing supply. Some increase could come by changing some of the commercial zoning in the Plan to residential. Alternative 3 provides a guideline for this. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

### Response

Comments assert that the SEIR does not discuss the implications of the jobs/housing balance analysis of the proposed project and does not offer mitigation measures to offset the conclusion that the number of housing units added in the Project Area falls short of the additional housing demand in San Francisco associated with Project Area employment growth. Other comments urge changes to the proposed project to improve the jobs/housing balance.

The SEIR does discuss the implications of the jobs/housing balance conclusions in several places. Implications for the housing market are presented on pp. V.C.35-V.C.36. Those implications are not a physical environmental effect, so no mitigation measures are required or identified. The SEIR does identify the related transportation and related air quality physical effects, see particularly p. V.E.67,



where the significant traffic and transit congestion impacts associated with cumulative and Mission Bay project travel demand are identified. Implicit in the Mission Bay project and cumulative travel demand estimates are trip distribution factors (where people are traveling during the p.m. peak traffic hour) that reflect the assumption (consistent with the jobs/housing balance analysis) that many San Francisco workers will continue to live outside the Project Area and the City. (See pp. D.33-D.38 in Appendix D, Transportation.)

Moreover, the SEIR does provide policy makers with alternatives representing different policy choices in terms of the amount of economic development and employment growth and the amount of housing accommodated in the Project Area. As indicated by one of the comments, Alternative 3 is an example of a land use mix for the Project Area that is almost entirely devoted to residential development. Pages VIII.99-VIII.100 describe the jobs/housing balance implications of that Alternative compared to those of the proposed project. The differences in housing market implications for nearby areas are presented on p. VIII.102. Alternative 1 is another land use alternative for the Project Area that results in more housing supply compared to housing demand in San Francisco associated with Project Area employment growth. The difference in housing market impacts is described on pp. VIII.15-VIII.17. Both of these alternatives indicate where more housing could be developed in the Project Area.

## **Project Employment**

### ***Comments***

Alianza is concerned and wants to negotiate and support opportunities for interested Latino adult men and women who want construction job opportunities and have proved themselves clean and sober and need decent paying and meaningful work. . . Alianza wants the staff to know it's possible. It does not want to be included or made a part of the arrangements for the funded agencies. We would like to get in touch with your staff to develop a memorandum of understanding regarding these issues. (*David Aldape, President, Alianza*)

We try to see if you could [im]prove the construction work for our people, to see if we could get these people out of the streets, to liberate them, to help them out, to give them jobs, get them off drugs, give them some type of direction. (*Carlos Soto, Speaker Bureau of Tobacco, Alcohol and Drugs, Latino Center for Alcoholism for Spanish Speaking* )

But now there's one thing I did not see in that whole report. And of course nobody mentioned it as an environmental problem. And that's employment. That's education and employment for the citizens, for the people who live here, for the unemployed who live here. (*Enola Maxwell*)

We also urge you to ensure that there is adequate opportunity, more than adequate opportunity, exceptional opportunity for the inclusion of minority union firms in the contracting procedure. (*Calvin Womble, President, The Ellington Group*)

We believe that responsible development of Mission Bay would act as a catalyst to create thousands of jobs for local residents, ranging from the short-term construction jobs to the long-term employment opportunities. (*Maria Poncel, San Francisco Partnership*)

A couple of areas that we are really looking at, one is employment. We are looking at the area of Bayview, Hunters Point, we've got about 13 1/2% in unemployment there. Certainly I'd like you to see you take a serious look in developing a training-type program where we can bring these young people into it. (*Comer Marshall, Executive Director, Urban Economic Development Corporation*)

I do, however, want to make sure that we make mention for public record that we ask that the Commission begin to look at the implications of good faith efforts that pertain to employment opportunities for community residents, look at possibilities of establishing program -- training programs, as well as just opportunities for the retail businesses, from construction to the day-to-day operations for the individual retail businesses that are going to be established within this particular area. We ask that you consider all that and ensure that there is some mechanism by you to make sure that there is representation. (*Dwayne Jones, Executive Director, Young Community Developers*)

#### ***Response***

The comments raise concerns about employment and training opportunities for the local community and minority union firms during and after the construction of the project. Section V.C, Business Activity, Employment, Housing, and Population, pp. V.C.23-V.C.28, discusses Project Area employment and job opportunities. Total permanent employment in the Project Area would increase from about 1,700 jobs to about 30,000 at build-out. Total construction employment would be in the range of 15,000 person-years; over 15 years, an average of 1,000 full-time construction jobs per year. Provisions for local job training and employment programs is not the purview of the environmental review process and may be more effectively addressed by decision-makers as part of the planning and project approval process. For informational purposes, it is noted that the project includes a proposed economic development/job training program.

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#### **NOTES: Business Activity, Employment, Housing and Population**

1. Exhibit A-1 to Mission Bay Development Agreement, Housing Program, Section 6, Pricing of Affordable Units, p. A1-12.



## VISUAL QUALITY AND URBAN DESIGN

### Views

#### Comments

Then I go to the visual quality section which I'm very interested in because that's what we are all going to see. And I find the first of the viewpoints is up on the top of Potrero Hill and the project looks wonderful. There are no viewpoints taken. You can fold it out yourself. It's Roman numeral V, D-4. The project looks low and benign.

I think you should take some views not from the top of Potrero Hill but from midway on the hill where a lot of people live. (*Mary Anne Miller, San Francisco Tomorrow*)

The overall panoramic shot taken from viewpoint #1 is taken too high on the hill to assess the effect of a solid wall of buildings that will block the view from most residences on Potrero Hill. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

The project height and density will destroy, not protect major views of the Bay. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

#### Response

The comments state that the potential panoramic view from Potrero Hill, Figure V.D.4 on p. V.D.24, appears "low and benign," and that views of the Project Area from the residential streets midway on Potrero Hill should be included in the potential views of the Mission Bay Project Area. The comments also suggest that views of the Bay would be "destroyed."

Thirteen viewpoints of the Project Area, shown in Figures V.D.3 through V.D.16, were selected as representative views that provide an overall depiction of the visual quality, urban design setting, and project conditions. Descriptions of the 13 viewpoints are found on pp. V.D.8-V.D.13 and potential impacts are discussed on pp. V.D.25-V.D.45. Viewpoint locations of existing conditions and of the proposed project can be found in Figures V.D.1 (p. V.D.9) and V.D.2 (p. V.D.22), respectively. These figures and text provide information on visual effects from a range of locations in or near Mission Bay.

Figure V.D.3, on p. V.D.23, is the existing panoramic view from Potrero Hill. As noted on p. V.D.8, Viewpoint 1, as seen in Figures V.D.3 and V.D.4, was selected in order to provide an unobstructed, panoramic view of the Project Area from Potrero Hill. The foreground of Figures V.D.3 and V.D.4 include residential uses; this viewpoint is in fact similar to views from existing residential areas on Potrero Hill. The figures include and identify prominent features visible from Potrero Hill and provide an overall view of the Project Area.

The SEIR notes changes in views from Potrero Hill, and loss of some private views of the Bay. Figures V.D.3 and V.D.4 provide an overall view of the Project Area, as intended. Page V.D.25 notes that:

Views of the Bay Bridge, Bay, and East Bay hills from streets and private residences on the lower portions of Potrero Hill would be partially or fully obstructed. These visual changes would not be significant because important scenic views from public areas would not be substantially degraded or obstructed. However, views of the Project Area and beyond from lower portions of the hill are more likely to be already obstructed by existing buildings.

The photomontages, together with accompanying text, accurately and completely characterize visual changes that the project would cause. An additional view from Potrero Hill, as requested in the comments, would of necessity be taken from a single, arbitrary location, and would not add any information about overall view changes from Potrero Hill beyond those already depicted and described in the SEIR.

#### **Comments**

I'd like to say viewpoints 12 and 13, you cannot look at those and find that they are not going to be significant visual impacts. Look at them yourselves, viewpoints 12 and 13. (*Mary Anne Miller, San Francisco Tomorrow*)

Volume II Impacts Visual Quality and Urban Design. Mitigation Measures address only potential archaeological resources and impacts on Firehouse #30. Since no significant visual impacts have been found for the enormous addition of new volume and bulky massing, no mitigation measures are suggested. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

#### **Response**

One comment suggests that the visual impacts of the proposed project would be significant as represented in the figures in Section V.D, Visual Quality and Urban Design, as seen in Viewpoints 12 and 13.

Viewpoint 12, a northerly view of Third Street near 16th Street, and Viewpoint 13, a view from the north side of China Basin Channel near Sixth Street, are shown in Figures V.D.15 and V.D.16, respectively, and are discussed on p. V.D.13. Impacts at locations illustrated in Viewpoints 12 and 13 are discussed on pp. V.D.42-V.D.45. This discussion acknowledges that, while certain views would be altered and certain features now visible would be partially or wholly blocked by new development, those effects would not be considered significant. The visual simulations in Figures V.D.15(b) and V.D.16(b) illustrate general massing and height permitted under the proposed



Redevelopment Plan documents, but do not necessarily represent maximum or actual expected development at any particular location nor specific architecture or urban design.

The standards of significance, discussed on p. V.D.14, define significant impacts to the visual quality or character of a site as those changes which would substantially degrade or obstruct “important scenic views from public places.” As stated on p. V.D.25 the “visual changes would not be significant because important scenic views from public areas would not be substantially degraded or obstructed.” The change in views from Third Street (a road corridor shown in Figure V.D.15) and from the north side of China Basin Channel (now vacant land with the I-280 stub) would not be considered public areas in this context.

Because the SEIR does not identify significant adverse effects on visual quality, no mitigation measures are listed for this topic.

#### ***Comment***

##### **Urban Design**

Volume I. p. II.8 “The project would have no significant visual impacts.” This assertion is not supportable after examining the cross-sections and elevations which indicate a project which will have profound visual impacts from all the adjacent areas of the City. . . .

Various pages - The assessment of visual quality depends on computer simulations of the project as it would be seen from 13 viewpoints. It is impossible to look at the simulations from viewpoint #4, 5, 6, 7, 9, 11 and 12 and not conclude that the height and massing will have a significant visual impact. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

#### ***Response***

The comments express the belief that the height and massing of the proposed project would significantly impact visual quality.

As illustrated by Figures V.D.3 through V.D.16, changes in views would occur with the project. The conclusion of the “Views” discussion on p. V.D.45 states “the project would alter certain views and certain features now visible would be partially or wholly blocked from various locations.” Although individual opinions may differ, the overall effects of these changes, while substantial due to the size of the project, are not considered to be significantly adverse, based on the analysis in the SEIR evaluating the changes against standards of significance.

Please see also the second response under “Views” on pp. XII.75-XII.76. This response discusses the standards of significance for visual quality with references to specific viewpoints in the SEIR.

**Comment**

The “Potential Views” in Figure V.D.11 should show the Harbor frontage as it will continue to exist. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

**Response**

The comment asserts that Figure V.D.11 should illustrate features at the Mission Creek Channel frontage which will continue to exist.

Figure V.D.11, p. V.D.37, shows existing and potential northeast views from the Channel Street area. As illustrated in Figures V.D.11(a) and V.D.11(b), the new alignment of Channel Street, farther south of the Channel and extending from Owens Street, would facilitate the development of residential use buildings, neighborhood-serving retail, and landscaped open space replacing Channel Street itself and the existing truck terminal warehouse and loading area. The figure illustrates that the views of the China Basin Building and the Lefty O’Doul Bridge would be retained. While not illustrated in Figure V.D.11(b), with the project, 50 parking spaces adjacent to the existing Channel Street, as seen on the same page in Figure V.D.11(a), would continue in the vicinity, adjacent to landscaping and residential development. The visual simulation is not intended to represent development at any particular location or to depict details; therefore, no change in Figure V.D.11(b) is necessary.

**Comment**

p. II.40 F. Areas of Controversy. Visual impacts of this enormous project are not mentioned as areas of controversy when they were mentioned as areas of concern at every CAC Design Committee meeting that I attended. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

**Response**

The comment requests that visual impacts be added to the list of areas of controversy. Visual impacts were addressed on p. II.40 of the Draft SEIR as “. . . density of development; allowable building heights, especially as would be seen from Potrero Hill; . . .” The second sentence of the first full paragraph on p. II.42 of the Final SEIR (p. II.40 of the Draft SEIR) has been revised as follows:

**Known areas of controversy about Mission Bay include concerns about: traffic impacts south of Mariposa Street; density of development; visual effects from allowable building heights, especially as would be seen from Potrero Hill; potential water quality and fish and wildlife impacts from increased sewer overflows; sufficiency of proposed risk management plans in preventing potential fish and wildlife and human health impacts from contaminated soils and groundwater; potential impacts on wildlife habitat along China Basin Channel; sufficiency of proposed open space, particularly in Mission Bay North (a project planning issue rather than a CEQA environmental issue); availability of**



**long-term rental units versus conversion of rental units to for-sale condominiums (a social/economic issue rather than a CEQA environmental issue).**

### **Building Heights and Bulk Near Open Spaces**

#### ***Comment***

Viewpoints 7 and 9 -- again this is in the visual quality section -- there is enormous height beside open space. And then the open space is shown as if there are no cars going through it. And there are cars going through at the edges of the commons. (*Mary Anne Miller, San Francisco Tomorrow*)

#### ***Response***

The comment addresses building heights allowed near open space, as shown in Viewpoint 7 in Figure V.D.10, northerly views of China Basin Channel, and Viewpoint 9 in Figure V.D.12, east views of the Central Subarea, and the relationship of open space shown to roadway traffic.

As noted on p. V.D.21, the viewpoints were prepared to represent the conceptual massing, lot coverage, heights, and vertical setbacks associated with the proposed project. They depict representative height and massing within each height zone and include structures at maximum proposed height limits. These simulations are based upon proposed Redevelopment Plan documents. Allowable heights near the open space shown in Figure V.D.12 could reach maximum heights of 160 feet for certain buildings. Approximately 80% of the buildings to the north of The Common would be up to 65 feet while those on the south side would range from about 30 to 110 feet in height (p. V.D.39). Heights depicted in Figure V.D.10, looking north from the south bank of China Basin Channel, represent the allowable heights which range from up to 65 feet to up to 160 feet, contingent upon use and proximity to the Channel.

Figures V.D.10 and V.D.12 accurately describe the project for Viewpoints 7 and 9. There are no cars shown in Figure V.D.10 because there would not be accessible roadways at this location in the Project Area. Figure V.D.12 depicts two cars at the edges of The Common, north and south of the open space. The proposed roads adjacent to the open space seen in Figure V.D.12 would be east-west streets, as described on p. V.E.41 in Section V.E, Transportation. As noted on p. V.D.21, elements in the simulations such as vehicles, pedestrians, or landscaping are intended to illustrate the size and scale of buildings in the views. They are not intended to illustrate traffic conditions after development of the project.

### **Comments**

Project is out of scale with surrounding neighborhoods. . . (Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association)

In general, we feel that the density and scale of the project is too high, and that the computer-generated photos that were previously mentioned in the EIR show buildings that are totally out of any human scale, and we propose that the number of 90-foot buildings be limited and that no 90-foot buildings be allowed on the waterfront. (David Siegel, Lower Potrero Hill Neighborhood Association, and Mission Bay Citizens Advisory Committee)

### **Response**

The comments express the opinion that the proposed project is out of scale with surrounding neighborhoods.

The comment is noted. Please refer to Section V.D, Visual Quality and Urban Design, which addresses the Mission Bay project's effects on visual quality. Pages V.D.1-V.D.46 discuss visual character, architectural resources, urban design, and views associated with the project. The comment appears to express an opinion on the project, and does not directly address the content or adequacy of the SEIR.

One comment requests that the number and location of 90-ft. buildings be limited. As shown in Table III.B.2 in Chapter III, Project Description, the number of 90-ft. buildings is limited to certain specific percentages of the developable land area. As shown in Figure III.B.5, 90-ft. buildings are proposed inland of Terry A. François Boulevard; none of the buildings are on the waterfront. Additionally, adjacent to South Street and between South and 16th Streets, buildings closest to Terry A. François Boulevard would be limited to 55 ft. in height.

### **Comments**

The environmental visual analysis is absolutely wrong. It actually shows a maximum bulk that I estimate is between 30 to 50% bigger than the actual project will be. And especially taking into account an unprecedented 40% of the land area south of Mission Bay in the residential districts will be City affordable housing, and we affordable housing developers can only afford to go 50 feet high. I find it unusual to look at a plan that looks at a street after street after street as if they are going to be 80, 90, 120-foot buildings when four-tenths of that will only be 50-foot high affordable housing. (Tom Jones, Asian Neighborhood Association)

The DSEIR does not address the Maximum Development Standards in the context of height and bulk shown (III.22), and the pictures illustrating view simulations (V.D.21-V.D.45) give a misleading impression of the density of the project. The maximum development program that has been established for Mission Bay is a key component of the Design Standards (DS&G, p.23). The SEIR should outline and illustrate the impact of the maximum development program in the section on



Visual Quality and Urban Design Impacts. (*Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee*)

### **Response**

The comments state that the visual analysis presented in the SEIR either overestimates the maximum bulk of the project by 30 to 50%, or that the simulations misrepresent maximum development.

The SEIR accurately represents a conservative analysis of project height and massing. As described on p. V.D.21 under “Views,” a three-dimensional model was prepared by Johnson Fain Partners, architects for Catellus, to represent the conceptual massing, lot coverage, heights, and vertical setbacks associated with this project, based upon maximum developable floor area by land uses as given in Table III.A.2 on p. III.3 and height and bulk limits shown in Figure III.B.5, on p. III.23, and described in Table III.B.2, on pp. III.24-III.25. Pages III.22-III.28 describe the height and bulk controls. Visual simulations from 13 selected viewpoints were developed based upon this three-dimensional model. As specific building locations, sizes, and designs are unknown at this time, representative height and massing within each height zone were modeled to include some structures at maximum proposed height and bulk limits to conservatively analyze the project as a whole.

As noted on Figures V.D.5 to V.D.16, “the visual simulation illustrates general height and massing permitted under the proposed Redevelopment Plan documents, but does not necessarily represent maximum development at any particular location [emphasis added] nor specific architecture or urban design.”

The model includes structures in residential areas at or under 50 feet in height. For example, Viewpoint 13, shown in Figure V.D.16, p. V.D.44, and discussed on pp. V.D.42 and V.D.45, shows that the north side of China Basin Channel would have structures ranging from 40 to 65 feet in height, and these would be residential uses. Figure V.D.11 on p. V.D.37 also illustrates residential buildings in that height range. While individual affordable housing development could be 50 feet or less in height to limit costs associated with high-rise construction, the affordable housing in the project could also include dwelling units within market-rate developments that could be up to 160 feet tall.

### **Shadow and Wind**

#### **Comments**

In addition, unless measures are included to eliminate or greatly curtail shadow on proposed public parks, then the utility of the already underdeveloped open space component of the proposed project will be even more limited. . .

In addition, a mitigation measure to protect proposed parks and open spaces from excessive shadow of surrounding development (following the standard set forth in Proposition K, the Shadow Ban Ordinance) should be included. (*Joel B. Robinson, Acting General Manager, San Francisco Recreation and Park Department*)

Section VI.D. (Mitigation Measures) D.7 (Pedestrian-Level Winds) and D.8 (Shadows) are inconsistent with DS&G pp.38-39. The Wind Analysis and Sunlight Access to Open Space standards from the DS&G should be noted in the SEIR. (*Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee*)

The simulations of the massing taken from viewpoints #7 and 9 forecast a formidable presence of shadow-casting building at the edge of open space. There are insufficient setbacks and seemingly no building articulations to moderate these bulky volumes at the edge of open spaces where children are shown happily playing. . .

page VI.6 WIND AND SHADOWS. The reader is asked to defer questions regarding pedestrian level winds and shadows until actual developments are proposed. Aren't these impacts the province of this EIR? A program EIR should not be able to dismiss these impacts when the worst-case wind and shadow impacts could be tested at this time and dealt with in this EIR. It is unconscionable to postpone evaluation of these impacts and then leave it to the discretion of the Redevelopment Agency to require mitigations later. Criteria for design of buildings and modulation of offending heights should be included in this document at this time. Other development projects at this generalized state of knowledge of their height and massing are asked to simulate the wind and shadow impacts. Why is this EIR an exception? (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

### **Response**

These comments express concern about shadows on proposed open spaces. A mitigation measure following the general approach set forth in Proposition K, the Shadow Ban Ordinance, is suggested to protect proposed parks and open spaces from excessive shadow from surrounding development. Comments urging inclusion in the SEIR of the Design Standards and Guidelines pertaining to Pedestrian-Level Winds and Sunlight Access to Open Spaces are noted.

Redevelopment Plan documents provide for about 47 acres of publicly accessible open space at full build-out of Mission Bay. This area would include 8 acres of publicly accessible open space within the UCSF site. Proposed parks and open spaces in the Project Area would be owned or leased by the San Francisco Redevelopment Agency and would not be owned by or under the jurisdiction of the San Francisco Recreation and Park Department. As such, proposed parks and open spaces in the Project Area would not be subject to Proposition K (Section 295 of the City Planning Code).

The SEIR does not dismiss nor defer consideration of potential shadow impacts. Potential shadow effects from the project were analyzed in the Initial Study, published September 19, 1997 and included as Appendix A in the SEIR. As described on pp. A.32-A.34, the maximum shading



potential of new project buildings was analyzed, and resulting shadows would not shade any open space areas under the jurisdiction of the San Francisco Recreation and Park Department. Thus, no significant shadow effects would occur under the Shadow Ban Ordinance and the topic was focused out of the SEIR.

The Mission Bay Design Standards and Guidelines encourage new development to ensure sunlight access to open spaces and limit the area and duration of shadow. Pages 38 and 39 of the Design Standards and Guidelines provide guidelines for review of shadow effects of proposed development and goals to “reasonably limit areas of shadow on open spaces during the active months of the year and most active times of the day” (p. 38). As noted in Mitigation Measure D.8 on p. VI.6 of the SEIR, the Redevelopment Plan documents would require analysis of potential shadows on existing and proposed open spaces during the building design and review process. Mitigation Measure D.8 is consistent with findings in the Initial Study (Appendix A, pp. A.32-A.34) and is intended to require information pertaining to potential shadow effects on open space. Pages 38-39 of the Design Standards and Guidelines discuss this same approach in requiring review of shadow effects on open space.

As noted in the Initial Study (Appendix A, pp. A.35 and A.36), the 1990 FEIR found that no significant wind effects would be expected from buildings below 100 feet in height. Mitigation Measure D.7 on p. VI.6 identifies the Redevelopment Agency’s requirement, as part of the project, for review and analysis to avoid hazardous winds for any building above 100 feet in height. Page 38 of the Design Standards and Guidelines discusses this same approach in requiring wind analyses to address wind hazards and proposes guidelines for wind-conscious design.

As discussed in the Initial Study (p. A.35), the extent and magnitude of wind effects of new buildings in Mission Bay would depend on the actual design, height, bulk, and placement of each specific structure in relationship to adjacent buildings, streets, and open space areas. Since none of these building characteristics are known at this time, meaningful wind studies cannot be conducted at the program level for this SEIR.

In order to clarify the proposed mitigation measure related to wind, and to take into account the most recent drafts of the *Mission Bay: Design for Development--South, Standards and Guidelines*, August 5, 1998, pp. 36-68, and *Mission Bay: Design for Development--North, Standards and Guidelines*, August 5, 1998, pp. 34-36, the following revisions to Mitigation Measure D.7, on p. VI.6, are made.

### Pedestrian-Level Winds

- D.7** Require a qualified wind consultant to review specific designs for buildings 100 feet or more in height for potential wind effects. ~~The review would evaluate the need for windbreak features or further detailed wind tunnel studies of the proposed structures.~~ The Redevelopment Agency would require developers conduct wind review of high-rise structures above 100 ft. to conduct a microclimate analysis, including wind tunnel studies, Wind tunnel testing would also be required unless, upon review by a qualified wind consultant, and with concurrence by the Agency, it is determined that the exposure, massing, and orientation of buildings are such that impacts, based on a 26-mile-per-hour hazard for a single hour of the year criterion, will not occur. The purpose of the wind tunnel studies is to determine design-specific impacts on hazard criteria based on the above hazard criterion and to provide a basis for design modifications to mitigate these impacts. Projects within Mission Bay, including UCSF, would be required to meet this standard or to mitigate exceedances through building design.

Measure is identified as I.10 in Appendix A, Initial Study. Applies to Mission Bay North and Mission Bay South.

### Pedestrian Bridge

#### *Comment*

[C]onceptual drawings of the new bridge on V.D.8 (b) and V.D.11 (b) show no pivot pier about which a "swing" bridge might operate. Although I note that the bridge design is conceptual, any "swing" bridge supported by a pivot pier would need to provide adequate horizontal clearance for houseboats and larger vessels currently moored upstream, and sufficient clearances for a 65 ft. high derrick barge to safely pass. (W.R. Till, Chief, Bridge Section, U.S. Coast Guard)

#### *Response*

This comment notes that the conceptual drawings of the new "swing" bridge, as they appear in Figures V.D.8(b) and V.D.11(b), fail to illustrate a pivot pier about which a "swing" bridge might operate. The comment states a concern for adequate bridge clearance for vessels or for a 65-foot derrick barge.

Figure V.D.8(b), a southwest view across China Basin Channel, and Figure V.D.11(b), a northeast view from the Channel Street area, include a schematic design for a proposed pedestrian bridge over China Basin Channel at the extension of Fifth Street. Page V.E.46 in Section V.E, Transportation, notes that the pedestrian bridge would be a "swing" bridge to accommodate maritime uses of the Channel, with construction subject to obtaining the required approvals. The actual design of the pedestrian bridge would provide adequate clearances, as required by the Coast Guard and other appropriate agencies.



As noted on p. V.D.21 of the SEIR, the simulations are not intended to represent specific uses or designs.

## **Architectural Resources**

### ***Comment***

The Landmarks Board is the body charged with stewardship of the historic and architectural heritage of San Francisco, and we review EIR's with our charter in mind. Frankly, we were disappointed that historic resources did not warrant a separate section or even a separate heading in this DSEIR, and we were surprised that we had to search for any attention to our area of interest given the specific listing of this category in the CEQA regulations and in standard Initial Study forms. (*Daniel F. Reidy, President, Landmarks Preservation Advisory Board*)

### ***Response***

The comment expresses concern that historic architectural resources did not warrant a separate section or heading in the SEIR.

"Architectural Resources" is listed as a subheading on p. XIII.10 under "Visual Quality and Urban Design" in Chapter XIII, Report Outline. The Report Outline was placed in Volume III (Volume IV of the Final SEIR) to provide easy reference to subject headings and topics discussed within all volumes of the SEIR. Architectural resources are discussed on p. II.8 in Chapter II, Summary, and on pp. V.D.6 and V.D.20. Mitigation measures for architectural resources can be found on p. VI.3.

Architectural resources were discussed in the Initial Study (Appendix A, pp. A.70-A.72) under standard CEQA Checklist order. The main discussion of architectural resources is contained in the 1990 FEIR, Section VI.I, as noted in the Initial Study. New information about setting and impacts for architectural resources comprised only about one page of text and did not warrant a separate chapter in the SEIR. To facilitate finding the discussion in the SEIR, the Table of Contents for Chapters V and VI on pp. iii-iv has been modified as follows:

## **D. Visual Quality and Urban Design (including architectural resources)**

### ***Comment***

We could not find any historic architectural survey of the buildings to be demolished. In the midst of the Land Use Impacts section, various buildings addressed on pages V.B.12 through 15 are listed for demolition, and only Fire Station No. 30 is mentioned on p. V.B.12 and in Section V.D. as an "Architectural Resource." If there has been a competent survey of all buildings in the project area slated for demolition evaluating them for historic value, that survey should be identified and made available as part of the record. Considering the 19th century commercial and railroad uses in this

area, it seems curious that there are no structures with potential merit as historic resources except for Fire Station No. 30. (*Daniel F. Reidy, President, Landmarks Preservation Advisory Board*)

### ***Response***

This comment addresses the demolition of buildings within the Project Area that may have historic value. It is noted that Fire Station No. 30 is the only building addressed as an Architectural Resource within the SEIR. Concern for potential sites and structures associated with the 19th century commercial and railroad uses in the area is also noted.

Page V.D.6 of Section V.D, Visual Quality and Urban Design, notes that Fire Station No. 30 is identified as potentially eligible for the National Register of Historic Places. The Lefty O'Doul Bridge and the Peter Maloney Bridge are also noted as important architectural resources. These findings are discussed and concluded in a report prepared by David Chavez Associates, "Cultural Resources Evaluation for the Mission Bay Project, San Francisco, California," December 1987. The report was prepared for the 1990 FEIR and is incorporated by reference into the Initial Study on p. A.70 of the SEIR. Fire Station No. 30 is identified on p. V.B.12 and in Table V.B.1, in Section V.B, Land Use, as an architectural resource which "could be either demolished or retained by the City." Architectural Resources are summarized on pp. V.D.6 and V.D.20 of the SEIR and are listed by subject within Chapter XIII, Report Outline on p. XIII.10.

The Initial Study, Appendix A, notes on p. A.71 that a 1997 review of historic resources by David Chavez Associates confirmed information in the 1990 FEIR and did not identify any new information that would alter the discussions or conclusions in the 1987 report. Significant historic architectural resources associated with 19th century commercial and railroad uses within the Mission Bay Project Area were not identified in either Chavez survey.

### ***Comments***

Ultimately we found references to Fire Station No. 30 on pages V.D.20-21 buried in the Visual Quality/Urban Design Impacts section and the acknowledgment that it is considered potentially eligible for the National Register and may be considered for demolition. The Project Description does not clarify whether or not this building will in fact be demolished or not.

We disagree with the DFEIR's conclusion on p. V.D.21 that this potentially significant impact (demolition of the building and presumably loss of a significant historic resource) would be mitigated by Measures D2.a and D2.b in the Mitigations section. Mitigation Measure D2.a is conditioned upon retaining an architectural historian to prepare an evaluation of the architectural integrity and historic importance of Fire Station No. 30 and, if determined eligible, to preserve, rehabilitate and reuse it. Considering that this project has been in the works for many years and if Fire Station No. 30 is in fact the only identified potential architectural resource, then this technical evaluation should have been performed as part of the Subsequent EIR.



Mitigation Measure D2.b. is inconsistent with Measure D2.a. in that D2.b. presumes that the Fire Station will be demolished and that its loss can be mitigated by a Historical American Building Survey and lodging copies of photographs, drawings and measurements of the structure with “appropriate federal, state and city agencies,” and trying to salvage and conduct selective re-use of building materials. This measure does not provide adequate mitigation for the loss of a significant historic resource, and the DSEIR presents no economic or engineering analysis demonstrating that the demolition of the Fire Station is absolutely unavoidable to enable the Mission Bay project to go forward. (*Daniel F. Reidy, President, Landmarks Preservation Advisory Board*)

### ***Response***

The comment requests clarification of the Project Description regarding the potential demolition of Fire Station No. 30, and asserts that Mitigation Measures D.2a and D.2b are insufficient mitigation for the loss of a potentially significant historic resource. It is asked that technical evaluation for significant historic resource identification of Fire House 30 be included in the EIR. The comment asserts that Mitigation Measure D.2b is inconsistent with Measure D.2a.

As noted on p. V.D.15, Fire Station No. 30 is identified as an architectural resource that could be either demolished or retained by the City. Page V.D.20 states that no decision has been made by the City as to whether it would retain or demolish Fire Station No. 30. Demolition of Fire Station No. 30 has not been proposed as part of the Project Description, but a conservative analysis in the SEIR discusses potential demolition and related mitigation.

Mitigation Measure D.2a and D.2b, on p. VI.3, are intended as steps for a process resulting in the reduction of significant impacts on historic resources. Measure D.2a requires retention of an architectural historian to prepare an evaluation of the architectural and historical significance of Fire Station No. 30 prior to development on the site. If the building is determined to be eligible for the National Register, preservation, rehabilitation, and reuse of the building in a manner consistent with the Secretary of the Interior’s guidelines for historic preservation would mitigate potential significant impacts if the structure were altered. Measure D.2b is designed to “reduce (though not eliminate) the significant impact prior to demolition of the structure.” This second measure would require Historic American Building Survey documentation of the structure; distribution of the documentation to appropriate federal, state, and city agencies; and selective salvage and reuse of building materials. While Measure D.2a would mitigate a potentially significant impact on an historical resource, it is acknowledged that Measure D.2b would reduce, but not avoid, a potentially significant impact. Measure D.2b is intended to be considered only if Measure D.2a is not selected. Therefore, the two measures are indeed inconsistent, as noted by the comment.

Subsequent evaluation of Historic Resources was not included in the main text of the SEIR because discussion and conclusions were included in the Initial Study (Appendix A, pp. A.70 and A.71).

***Comment***

The project area is adjacent to or nearby some of the historic Piers in the Port of San Francisco from China Basin south to Pier 68. How the height and bulk of anticipated project buildings will impact the Pier structures should be more clearly expressed in this environmental document. (*Daniel F. Reidy, President, Landmarks Preservation Advisory Board*)

***Response***

The comment requests that examination of the impact of the Mission Bay development on historic piers in the Port of San Francisco from China Basin south to Pier 68 be included in the SEIR.

The height and bulk of anticipated projects within the Project Area adjacent to piers east of Terry A. François Boulevard are discussed on p. V.D.39 in Section V.D, Visual Quality and Urban Design, and on p. V.B.23 in Section V.B, Land Use. Piers near the Project Area include Pier 48, directly south of China Basin, and Pier 70, at 20th and Illinois Street. As can be seen in Figure V.D.2, on p. V.D.22, both piers are outside the boundaries of the Project Area. Pier 48 is located at the northern end of Terry A. François Boulevard approximately 1,000 feet from the northeastern boundary of the Mission Bay South Redevelopment Area at Third Street. Pier 70 is approximately 2,000 feet from the southeast corner of the Project Area at Mariposa Avenue and Terry A. François Boulevard. Both piers have been identified in historic resources surveys as potentially eligible for the National Register of Historic Places. Piers 52, 54, 64, and 68 are adjacent to the Project Area, to the east of Terry A. François Boulevard, and have been identified as ineligible for listing on historic registers.

As noted on pp. V.B.23 and V.D.19, approximately 7 acres along the west side of Terry A. François Boulevard would be developed as open space. Development adjacent to part of the park frontage would be limited to 55 feet in height. Building heights along the Bayside linear park, west of the frontage development, would be limited to 90 feet. As seen in Figure V.D.12(b), a potential view from Terry A. François Boulevard near Pier 54, views would be altered as new commercial and industrial buildings would replace one-story warehouses and vacant land. Limited northwest views of downtown structures would be seen from Terry A. François Boulevard. The effects of these changes on visual quality and urban design would not be considered significant. Because of the relatively distant locations of Pier 48 and Pier 70, changes of views due to Mission Bay development would not be expected to change the urban design context of those piers.

***Comment***

There does not seem to be a preservation component within the range of alternatives considered as part of the DSEIR or an interest in including historic preservation concerns within the identified environmentally superior alternative. (*Daniel F. Reidy, President, Landmarks Preservation Advisory Board*)



***Response***

The comment asserts that an historic preservation component should be included within the environmentally superior alternative identified in the SEIR.

As noted on pp. V.D.6 and V.D.7, the “Cultural Resources Evaluation for the Mission Bay Project, San Francisco, California,” a report prepared by David Chavez Associates in 1987, and a subsequent 1997 analysis of historic resources by the same firm identified Fire Station No. 30, the Lefty O’Doul Bridge, and the Peter Maloney Bridge as important architectural resources. These three sites are adequately discussed within the SEIR. Mitigation measures for potentially significant impacts upon Fire Station No. 30, identified by these surveys as potentially eligible for the National Register, are included on p. A.70. Mitigation measures that would avoid a significant adverse effect, including Measure D.2a, have been identified in the SEIR. The SEIR adequately identifies measures to avoid a potentially significant effect on architectural resources. Because of the discussion in the SEIR, and in the absence of any unavoidable significant impacts on architectural resources, it is not necessary to include a preservation component as part of the identified environmentally superior alternative in the SEIR. A preservation alternative is more commonly analyzed for a development project-level EIR, in which a project would unavoidably impact an historic resource by demolishing or adversely altering it as a part of the project. For a program EIR such as Mission Bay, alternatives are formulated to represent major conceptual differences in the entire program. In the case of Mission Bay, Mitigation Measure D.2a would avoid the impact on Fire Station 30 and could be accomplished under any of the alternatives studied in the SEIR. Therefore, a preservation alternative would not comprise a major conceptual difference in the project’s program and is not necessary to include as a separate SEIR analysis.

## TRANSPORTATION

### Traffic

#### *Comment*

Thank you for including the California State Department of Transportation (Caltrans) in the review process for the above-referenced project. We have completed our review and find the document adequate in addressing the impacts and mitigation. (*Harry Y. Yahata, District Director, Department of Transportation*)

#### *Response*

Comment noted.

### Intersections

#### *Comments*

Table V.E.10: Intersection Levels of Service: The assumptions for level of service ("D") at the Sixteenth Street/Seventh Street intersection seem optimistic and do not appear to account for increasing levels of traffic-blocking rail operation across the Sixteenth Street grade crossing. (*Richard Mlynarik*)

[T]he infrastructure within and surrounding the project cannot withstand the traffic projected from the project. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

#### *Response*

Comments question the validity of the level of service calculated for the intersection of Seventh and 16th Streets, particularly if commuter rail service is expanded, and suggest that the infrastructure cannot withstand the projected traffic estimates.

Pages V.E.17 and V.E.74 note that the evaluation of the operation of the intersections of Seventh and 16th Streets, Seventh Street and The Common, and Seventh and Berry Streets considered the impact of Caltrain at-grade rail crossings. The influence of train operations was determined for existing conditions, as well as under future conditions when trains would be more frequent and therefore cause a greater impedance of vehicular traffic flow into and out of the Project Area. By using the number of trains that would be passing through these crossings during the p.m. peak hour (determined by Caltrain) and the approximate amount of time during which the crossing gates would be down, the assumptions about intersection signal timings were modified to reflect the reduced capacity of traffic movement across the tracks into and out of the Project Area.



Figure V.E.2 on p. V.E.3 identifies the study area intersections. These include both intersections within and surrounding the Project Area. On p. V.E.37, the SEIR explains the intersection level of service (LOS) criteria for determining whether the additional traffic generated and attracted by the project would represent a significant impact on the environment. If the additional traffic generated by a particular project 1) causes an intersection to deteriorate from an acceptable LOS (LOS A, B, C, or D) to an unacceptable level of service (LOS E or F), 2) interferes with existing transportation systems causing substantial alteration to circulation patterns or causing major traffic hazards, or 3) contributes substantially to cumulative traffic increases at intersections that would result in deterioration of traffic conditions to unacceptable levels, then the impact would warrant mitigation. The traffic analysis in the SEIR shows that, as suggested by one comment, the operation of many of the intersections studied would significantly deteriorate under existing plus project conditions, and additional intersections would significantly deteriorate under future cumulative conditions with the project. Mitigation measures are available that, if adopted would enable all of the study area intersections with the exception of the I-80 freeway on- and off-ramps to operate at LOS D or better under both existing and future conditions. The proposed mitigation measures for the intersection of Third and King Streets may be difficult to implement; if they were not required as part of project approval, then the project would result in significant unmitigated traffic impacts at this location. As explained in Section VI.E, Mitigation Measures: Transportation, some intersection measures are included in the proposed project and others would need to be considered by decision makers. Measures that might improve LOS or freeway ramps from existing LOS F conditions would involve increasing ramp capacity. As indicated on p. VI.26, the City and County of San Francisco has a general policy not to increase capacities of freeway ramps.

#### Lower Potrero Area

##### *Comments*

Regarding the Fourth and Mariposa Street intersection, we are concerned that the projected high volumes of traffic along Fourth Street will negatively impact the residents who live on Minnesota Street which Fourth Street will empty into. And this is one of the mitigation issues that needs to be seriously addressed. (*David Siegel, Lower Potrero Hill Neighborhood Association and Mission Bay Citizens Advisory Committee*)

The Subcommittee acknowledges the DEIR's presentation of the concerns, addressed in the earlier Mission Bay environmental analysis, regarding the possible intrusion of traffic onto Minnesota Street and into the Potrero Hill neighborhood when Fourth is extended to Minnesota (pages V.E.77-78). . .

However, the Committee wishes to reinforce the importance of properly addressing this matter at such time that Fourth Street is extended, through: one, proper monitoring and reporting of traffic volume changes on Minnesota; two, installation of proper signing to discourage traffic from moving onto

Minnesota, both upon the completion of Fourth Street and subsequently, as necessary; and three, the implementation of the one-way modification to Minnesota if traffic conditions warrant. With respect to these matters, what agency will be responsible for the funding and/or accomplishment of this monitoring activity? What is the mechanism for reporting on the monitoring and initiating any necessary actions? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

### ***Response***

Comments express concern that the vehicles projected to use Fourth Street in Mission Bay South will also travel on Minnesota Street, and consequently negatively impact the residents living on Minnesota Street. Comments also suggest monitoring the traffic volumes on Minnesota Street, providing signing that discourages traffic on Fourth Street from using Minnesota Street, and possibly making Minnesota Street a one-way street; and inquire of the funding source and mechanism for such measures.

As indicated on pp. V.E.77-V.E.78, the main traffic impact analysis assumes no project traffic would use Minnesota Street. However, the SEIR also addresses the potential impact of traffic traveling from Fourth Street to Minnesota Street, with a worst-case scenario assuming that up to 650 vehicles per hour would travel on Minnesota Street from Fourth Street if vehicular traffic were allowed to travel south through the intersection. This level of traffic would cause the intersection of Mariposa Street with Fourth and Minnesota Streets to operate at an acceptable level of service C, which does not represent a significant environmental impact. Accordingly, mitigation measures would not be required.

However, decision-makers could consider the approaches suggested by the comments. Appropriate signs could be posted and striping could be added to southbound lanes of Fourth Street to discourage vehicles from traveling through the intersection to Minnesota Street. Other traffic calming measures are discussed on p. V.E.78. The primary agencies responsible for implementation and monitoring of such measures within the Project Area would be the Department of Parking and Traffic and the Redevelopment Agency. The SEIR does not identify possible funding sources for these measures, because they are not needed to mitigate significant impacts, and economic issues are not necessary topics in EIRs, pursuant to CEQA Section 21151(b) and State CEQA Guidelines Section 15360.

In addition to the discussion of traffic calming measures in the main text of the SEIR, Appendix D, Transportation, on p. D.21, describes the various alignment alternatives that were considered for Fourth Street in Mission Bay South, provides an assessment of the issues and impacts associated with each of these alternatives, and discusses the reasons for locating the intersection of Fourth Street with Mariposa Street at the existing intersection of Minnesota and Mariposa Streets.



## At-Grade Rail Crossing at Seventh and The Common

### Comments

Page V.E.41, Figure V.E.8: Grade separation of the Sixteenth Street crossing of the Caltrain right-of-way. . .Rail/street grade separation should be studied and pursued as an essential component of traffic and transit impact mitigation. . .

. . .To ensure street traffic flow, rail traffic flow, rail safety, and transit operational flexibility, this crossing should be grade-separated as part of the project. (*Richard Mlynarik*)

The new “Common” Street crossing to Seventh Street will also be subject to intense scrutiny by CPUC staff, due to anticipated difficulty clearing the crossing as trains approach. Questions raised in response to the DSEIR include:

1. Has a grade separated alternative been evaluated?
2. If so, was the design considered acceptable?
3. If not, why not?

. . .Has consideration been given to making Seventh Street one-way from 16th Street to Townsend?

Has consideration been given to locating the proposed at-grade crossing at any of the existing Seventh Street intersections, such as Hooper, Irwin, or Hubbel?

These last two questions arise from the traffic patterns predicted in the DSEIR, including the low levels of service at Seventh Street intersections (E/F without mitigation, D with mitigation) in combination with several other factors, such as the pm peak traffic volume exiting the project area via “Common” Street simultaneously with numerous commuter trains, the proximity of the tracks to Seventh Street, the likelihood that Seventh Street will be, at times, experiencing “gridlock” conditions (No room for vehicles from the crossing to enter the Seventh Street traffic stream), and the impossibility of effective railroad preemption of the intersection under such conditions. A one-way Seventh Street would give much greater storage, reducing the risk of gridlock. An intersection which crossed Seventh Street would give an alternate route, reducing traffic demand on northbound Seventh Street, and allow an “escape route” whenever the right turn to Seventh is blocked by queued vehicles. Either alternative should enable preemption to be effective. (*Roy Evans, Transportation Engineer, Rail Safety and Carriers Division, Rail Engineering Safety Branch, Traffic Engineering Section, California Public Utilities Commission*)

Caltrain is specifically concerned about vehicular traffic becoming trapped over the proposed Common Street (Mall Street) grade crossing due to level of service F traffic conditions projected in the project area. The traffic intersections and traffic signalization in the vicinity of the proposed Common Street (Mall Street) grade crossing must be designed to preclude this possibility.

As part of Caltrain’s Rapid Rail Study, Caltrain is evaluating grade separation projects. One candidate project is at 16th Street where Muni prepared a grade separation plan in the early 1990s. In order to improve safety and traffic flow in the area, especially when Caltrain increases service, the DEIR should include an evaluation of the benefits and impacts of grade separating the 16th Street

crossing. In order to improve safety, traffic capacity and emergency access, the Mission Bay project should be designed so as not to preclude a grade separation project at 16th Street in the future.

The intersection geometry presented in the DEIR for Common Street (Mall Street) is different from the geometry presented in the designs for the proposed Common Street (Mall Street) grade crossing, as discussed by the PCJPB, Catellus, and the City. If these changes to the design are implemented as discussed, please include within the traffic study an analysis of how the intersection will function from a traffic flow perspective. (*Darrell J. Maxey, P.E., Chief Engineer, Caltrain*)

### ***Response***

Comments inquire about design considerations of the rail crossing at Seventh Street and The Common, including consideration of a grade-separated structure and its feasibility, safety considerations for vehicles crossing the tracks, possible consideration of making Seventh Street a one-way street between 16th and Townsend Streets, or consideration of making the at-grade crossing at a nearby existing intersection with Seventh Street. Comments also suggest that the SEIR evaluate the benefits and impacts of a grade-separated Caltrain rail crossing at 16th Street, and that the Mission Bay project be designed so as to not preclude a grade separation project at 16th Street in the future.

The comments raise the issue of separating the grade of Caltrain railroad crossings from the grades of cross streets along Seventh Street. As part of the development and definition of the Mission Bay project, numerous alternatives were considered and evaluated to handle Mission Bay traffic that would be traveling to and from the northwest part of San Francisco across the Caltrain railroad crossings.<sup>1/</sup> These studies considered numerous alternative locations for grade separated crossings between 16th and Townsend Streets. Construction of a grade separated structure, either an over- or an underpass, would involve a structure that could clear both the Caltrain tracks and Seventh Street. In the case of an overpass structure, it would also have to be approximately 15 feet below the I-280 elevated freeway structure. The length of the approaches to either the over- or the underpass would have to be at least 300 feet in order to provide the appropriate grades for trucks and cars to operate safely.

The studies concluded that the construction of an overpass or underpass would be infeasible because: 1) lack of direct access to Seventh Street would not meet the needs of the traffic demand from the Mission Bay project and would instead cause traffic to intrude into adjacent neighborhoods; 2) clearance requirements between the I-280 freeway and the Caltrain tracks would make overpasses over the tracks difficult or impossible; 3) facilities that would use existing rights-of-way would have substandard grades<sup>2/</sup> for automobiles, trucks and bicyclists; 4) sight distance requirements would make over- and underpasses difficult to design in these locations; 5) limitations to property access on the west side of Seventh Street, combined with additional right-of-way requirements outside the Mission Bay Project Area that would be needed for a safe over- or underpass, would require the use



of private property and possible displacement of existing businesses; and 6) the construction cost differential between a grade separation (\$25 to \$30 million) and an at-grade crossing (about \$1 million) is so substantial.<sup>/3/</sup> The construction of underpasses would have additional disadvantages such as: 1) requiring underpinning of the recently widened footings of the I-280 structure, 2) requiring major utility relocation, 3) requiring difficult construction under an operating railroad. In the case of an overpass, the potential negative visual impacts could represent an additional disadvantage. In summary, a crossing over or under the Caltrain tracks would not be constrained by the Mission Bay development, but rather by the location of the existing transportation structures (railroad tracks and I-280 freeway viaduct) and potential right-of-way acquisition requirements west of Seventh Street, outside of the Mission Bay Project Area.

Although creating grade-separated rail crossings is not proposed as part of the project owing to the number of technical difficulties and disadvantages, nothing in the Mission Bay project would preclude construction of a grade-separated crossing at 16th Street if the Peninsula Corridor JPB were to choose to do so.<sup>/4/</sup>

The conversion of Seventh Street from the current two-way operation to one-way northbound is unlikely to be effective from a traffic circulation and accessibility perspective. In the vicinity of Mission Bay North, Seventh Street represents the western edge of the South-of-Market street grid system. It marks the point where the 45-degree skewed grid meets the true north-south/east-west street grid, which is most prevalent throughout the City. There are no continuous streets immediately to the west of Seventh Street which could be used to create a one-way couplet if Seventh Street were to be converted to a one-way street, as Eighth Street ends at Townsend Street and Sixth Street ends at the Caltrain tracks. Therefore, converting Seventh Street to a one-way operation would diminish traffic circulation and access in the Project Area and in the adjacent commercial industrial areas in the South of Market, Potrero Hill, and Showplace Square neighborhoods.

Although the level of service at the intersections of Seventh Street with Townsend Street, with Berry Street, and with The Common are estimated to operate at LOS E or F under year 2015 cumulative conditions, Mitigation Measures E.30, E.31, and E.32, on p. VI.19, would improve traffic conditions to an acceptable level of service (LOS C or D). If adopted, these measures would reduce the likelihood of gridlock on Seventh Street and, therefore, make railroad preemption (the coordination of the traffic signal phases with the crossing of a train) effective. Thus, there would be no need for additional capacity, such as one-way conversion. These measures would be considered for adoption or rejection as part of deliberations on whether to approve the project.

The comment is correct when indicating that aligning The Common opposite Hooper, Irwin or Hubbell Streets would be more effective from a traffic circulation and railroad preemption perspective. For this reason, several potential alignments for The Common as it approaches Seventh Street were considered and evaluated as part of the development and definition of the Mission Bay project. These alignments were opposite an existing street to the west of Seventh Street. However, all were rejected because of the constraints imposed by the recently widened columns supporting the I-280 freeway structure. Due to their considerable width, the columns present constraints both in terms of the physical width and location of the new roadway, and a safe stopping sight distance./5/

Traffic signals at intersections that cross the tracks would be interconnected with one another, and with the railroad crossing gates, so that when a train activates the crossing gates the traffic signal would briefly turn green for east- and westbound traffic traveling across the tracks to clear the crossing, and then would turn red. The most complex of these intersections would be in Variant 3A, that includes an extension of Berry Street leading to Common Street. Variant 3A is described and analyzed, and was added to the Final SEIR (as Section VII.D) under "Request for a Modified No Berry Street At-Grade Rail Crossing," under Variants, pp. XII.467-XII.481, later in this Summary of Comments and Responses. Under Variant 3A, Berry Street would turn south adjacent to the west end of the China Basin Channel, intersecting with Common Street next to the at-grade rail crossing to Seventh Street. Under Variant 3A, the intersection of Seventh Street and Common Street and the intersection of the extension of Berry Street with Common Street would operate as a single intersection. The signal at the intersection of Berry Street extension and The Common would initiate an all-red phase a few seconds before the westbound approach to the intersection of Seventh Street and The Common receives a red phase, which would occur a few seconds before the closing of the railroad crossing automatic gates are activated. Similarly, the northbound right-turn and southbound left-turn movements would receive a red phase a few seconds before the closing of the automatic gates of the crossing are actuated. At the same time, the signal on the far side of the westbound approach to the railroad crossing would be green for a few seconds prior to the closing of the automatic gates. Such coordination along with standard advance warning signs and flashing light signals would minimize the possibility of queuing on the Caltrain tracks.

#### Reduction of the Number of Railroad Crossings

##### *Comments*

The Mission Bay North residential neighborhood needs to be provided with access to the west, and without the extension of Berry Street across the tracks, this access would be jeopardized. The Subcommittee understands that it may be possible to extend and turn Berry Street to the south at the



west end of the Channel, in order to intersect with the street linking Hooper with the traffic circle, and to create a single, consolidated at-grade crossing of the rail trackage.

The Subcommittee strongly supports this proposal if an at-grade crossing at either King or Berry Street cannot be approved, and encourages the City and Catellus to take those steps which will allow the Plan to be modified, accordingly. (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

The plan shows Berry Street crossing the Caltrain tracks at grade. Currently, the Berry Street grade crossing of the Caltrain tracks is closed temporarily. Catellus has indicated its consent to permanently closure of the Berry Street and King Street grade crossings of the Caltrain tracks in return for receiving the Common Street (previously referred to as Mall Street) grade crossing of the Caltrain tracks in its letter of January 29, 1998 to Darrell J. Maxey, Chief Engineer, Peninsula Corridor Joint Powers Board - copy attached. The No Berry Street At-Grade Rail Crossing Variant should be the basic project design. If this crossing is included then an analysis should be made of the grade crossing accident hazards involved and the impacts it will have on traffic safety. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

This variant [Variant 3 No Berry Street At-Grade Rail Crossing Variant] should not be considered. The variant significantly degrades the operation of the street system adjacent to Pacific Bell Park. Delays at the Third/King Street intersections would increase by approximately 25% as compared to the option with Berry Street connecting from Fifth to Seventh Streets. (*John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants*)

The DEIR indicates that three grade crossings would be in place over the Caltrain tracks (Berry Street, the new Common Street (Mall Street) and 16th Street). The JPB is embarking on a program to reduce the number of grade crossings over the entire length of the railroad. The tentative agreement between the JPB, Catellus, and the City/County of San Francisco is to permanently close King Street and Berry Street grade crossings, and open the proposed Common Street (Mall Street) grade crossing. Finally, the opening of the Common Street (Mall Street) grade crossing will be subject to the California Public Utilities Commission approval. (*Darrell J. Maxey, P.E., Chief Engineer, Caltrain*)

### **Response**

Comments address the Peninsula Corridor Joint Powers Board's (JPB's) desire to reduce the number of at-grade rail crossings; note the tentative agreement between Catellus, JPB, and the City of San Francisco to permanently close the Berry Street and King Street crossings, and open the crossing at The Common; and express safety concerns associated with the new crossing. Comments also note that Variant 3 (No Berry Street At-grade Rail Crossing Variant) would degrade the operation of the street system near the ballpark, and suggest that the variant not be considered. Comments suggest that both King and Berry Street rail crossings remain closed in exchange for the provision of a crossing at The Common. Other comments support the proposal to extend Berry Street around the end of China Basin Channel to intersect with The Common, if a crossing at King or Berry Street cannot be approved.

The comments are correct when indicating that opening the Common Street at-grade railroad crossing would require the approval of the California Public Utilities Commission. This fact was noted on p. III.50 in “Approvals Required,” in Chapter III, Project Description, and in Appendix D, Transportation, on p. D.19 in the description of characteristics of the Seventh Street connector. Two variants to the project (Variants 3 and 3A) have been analyzed in the SEIR covering the situation where no railroad crossings are created in Mission Bay North, in case approval for a new crossing is not granted. Under both variants, there would have to be a reduction in overall development permitted in Mission Bay North because of the constrained accessibility to and from the west. Both variants assume that a rail crossing is approved in the northern portion of Mission Bay South.

There is no reason to believe that the rail crossings proposed in the project or in the Variants or Alternatives to the project would have more traffic hazards than other typical grade crossings along the Caltrain route. Any at-grade rail crossing inherently has some hazard for vehicles; design requirements such as automated gates, flashing lights, and bells are intended to minimize these hazards. These types of features are included in the proposed project (see, e.g. Measure E.18b on p.VI.11).

Several comments support Variant 3, the No Berry Street At-grade Crossing Variant; others do not. On p. VII.21, the SEIR discusses the reduced level of development within Mission Bay North under Variant 3 that would generate fewer vehicle trips and make it possible for the intersections of Third and King Streets, Fourth and King Streets, and Third and Townsend Streets to be mitigated to LOS D or better with the same mitigation measures proposed for the project. Reduced accessibility under Variant 3 would require all vehicles traveling to and from the westernmost portion of Mission Bay North to travel through at least one of these intersections. Therefore, when these intersections become congested, many vehicles traveling to and from Mission Bay North would not be able to choose alternative routes, increasing the average delays at those intersections compared to delays with project conditions. A similar but less intense situation would occur under Variant 3A (see Section VII.D in the SEIR or “Request for a Modified No-Berry Street At-Grade Rail Crossing,” under Variants on pp. XII.467-XII.481 for a description of this variant) because access to the west would be slightly less constrained as vehicles could use the Berry Street extension to The Common and Seventh Street. Access to Mission Bay North from the west in Variant 3A would continue to be indirect. The same mitigation measures proposed for the intersections of Fifth, Fourth, and Third Streets with King Street, and Third and Townsend Streets for Variant 3 would also mitigate the operation of the intersections to acceptable levels of service under Variant 3A.



## Freeways

### *Comment*

The traffic impacts of Mission Bay upon the two Mariposa intersections, i.e., between Pennsylvania and Indiana Streets, are examined in the DEIR (e.g., Figures VI.1 and VI.2, pages VI.24-25), but the traffic impacts of the I-280 on and off ramps at their intersections with 18th Street are not examined.

The ramps at 18th Street only serve traffic which is using I-280 north of 18th, and this represents an out-of-direction movement for much of Mission Bay traffic. However, this out-of-direction movement may provide a travel route which offers efficiencies to Mission Bay trips with origins or destinations in Eastbay or in the northeast quadrant of San Francisco. This would most likely be the case with trips originating or ending in the mid to south areas of South Mission Bay, and would also likely be the case during traffic conditions on Third Street when the new Giants ballpark is in use. For these trips and conditions, utilizing 18th and I-280 north might present a route with a shorter travel time than surface street options. This observation raises several questions:

- a. Does the DEIR traffic analysis conclude that this may be the case? That is, for trips between the southern areas of Mission Bay, and Eastbay and northeast San Francisco, would the use of 18th Street and I-280 provide a more efficient travel route than surface streets leading north from Mission Bay?
- b. If this is found to be the case, what are the specific impacts upon the intersections between 18th Street and I-280, including the intersection of Third and 18th Streets?
- c. If this was not previously analyzed, does an assumption of increased use of the I-280 ramps at 18th Street alter the traffic impacts described on Mariposa?
- d. If increased use of the I-280 ramps on 18th Street is probable, what are the implications for impacts to the block of Minnesota Street between Mariposa and 18th Streets? What mitigation measures should be considered for any identified impacts?
- e. Does the traffic analysis suggest that the increased use of the I-280 ramps on 18th Street is a traffic pattern which should be encouraged, in general or at certain times, in order to assist in mitigating traffic conditions on north-south arterials north of Mission Bay? If the answer to this is yes, what measures should be employed to encourage this traffic pattern and mitigate any associated impacts? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

### *Response*

The comment inquires as to the reason that the I-280 northbound on-ramp and southbound off-ramp at their intersections with 18th Street were not evaluated in the SEIR, and requests an identification of the implications associated with assigning a portion of project traffic using these ramps.

The I-280 northbound on-ramp and southbound off-ramp at 18th Street are only about one mile from the north terminus of the freeway, and are not heavily used. When used they most likely serve trips

between the northeast quadrant of San Francisco and areas south of Mission Bay South. The traffic impact analysis determined that during the p.m. peak hour, the on- and off-ramps both at King and Fifth Streets and at Brannan and Sixth Streets would be congested to a degree that utilizing surface streets, most notably Third and Fourth Streets, would have a shorter travel time than using I-280. For instance, if drivers use I-280 northbound from 18th Street, they might use the congested off-ramp at King Street but would still have to travel through the intersections of Third and King Streets and Fourth and King Streets that would also be part of surface street routes between the two areas. It is not likely that these drivers would have saved travel time by using the freeway for one mile, and they would be less likely to use this segment of the freeway in the future.

For all except the southernmost parts of Mission Bay South that are west of Fourth Street, using the 18th Street ramps to travel northward would require drivers to travel three to four blocks out of direction. Therefore the northbound 18th Street ramp was considered to be too indirect to be used by Mission Bay-bound traffic. For this reason, relatively few vehicles would be expected to travel southbound on Minnesota Street to 18th Street to the freeways; any such travel on Minnesota Street between Mariposa and 18th Street would have minimal impact on the commercial/industrial uses in this block.

If traffic were to use these ramps to travel between Mission Bay South and Brannan Street in the South of Market area, then the traffic conditions along Third Street and Fourth Street would most likely improve slightly, and the north-south streets would most likely experience slightly larger traffic volumes on the blocks between Mariposa and 18th Streets. In response to requests, the SEIR presents on p. V.E.77 the potential traffic impacts that would occur if some Mission Bay traffic were to travel on Minnesota Street to and from the area during the p.m. peak hour. However, because Mission Bay traffic is assumed not to use such a route during the peak commute hours due to lack of travel time savings, the increased traffic volumes on these streets would likely occur during off-peak periods, and the associated impact of any additional project traffic on these intersections would be minimal. Although such volumes of traffic would not create a significant impact for any of these intersections, measures discussed on p. V.E.78 could potentially discourage traffic from traveling south through the intersection.



## Circulation

### Mariposa Street

#### **Comments**

In general, the traffic flow on Mariposa Street from the 280 freeway down to Third Street needs to be looked at in-depth. (*David Siegel, Lower Potrero Hill Neighborhood Association and Mission Bay Citizens Advisory Committee*)

Page V.E.40-3: Changes to Circulation Pattern in Mission Bay: The planned improvements for the other key streets are described herein, but the changes to Mariposa Street are not. Please include a description for the improvements to Mariposa Street.

Pages D.9-15: Please include a section showing the planned improvements to Mariposa Street within the Project Area. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

#### **Response**

Comments request a description of planned improvements for Mariposa Street be added to the discussion in the section entitled “Impacts, Year 2015 Transportation System Assumptions, Traffic Circulation,” and request an in-depth review of the traffic conditions on Mariposa Street between the I-280 ramps and Third Street.

Although the proposed improvements to Mariposa Street are described in Appendix D on pp. D.19-D.20, the comment is correct in stating that there is no summarized discussion of these changes in Section V.E, Transportation: Impacts. Therefore, the third paragraph on p. V.E.41 has been revised to read as follows:

**In Mission Bay South, Third Street, 16th Street, Mariposa Street, and Owens Street would remain in substantially the same alignment as today. Exclusive left-turn lanes would be provided at intersections on 16th Street within the existing right-of-way. Mariposa Street would be widened on the north side within the Project Area to provide two lanes in each direction with left-turn lanes at major intersections, and the existing on-street parking would be eliminated. Owens Street would be extended to a circle roundabout and then east along the southern Channel edge to Third Street, replacing Channel Street.**

The traffic conditions on Mariposa Street, between the I-280 ramps and Third Street, which is approximately 1,500 feet in length, have been analyzed in detail in the SEIR at four locations. These

are at the I-280 on-ramp, at the I-280 off-ramp/Owens Street, at Fourth Street/Minnesota Street, and at Third Street, as discussed on pp. V.E.67-V.E.78 and shown in Figures V.E.12 and V.E.13. The analysis accurately describes expected operations, and no new information has been received since that would substantively change the conclusions presented in the Draft SEIR.

Terry A. Francois Boulevard

***Comment***

Illinois Street which currently runs north/south parallel between Third St. and Terry A. Francois should NOT BE DELETED FROM THE STREET GRID AND SHOULD BE EXTENDED FROM CHANNEL ST. TO CESAR CHAVEZ as a truck and baseball traffic route so that Terry A. Francois can be enjoyed by all as a low impact traffic bayside street. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

***Response***

The comment requests that Illinois Street be extended from China Basin to César Chavez Street to reduce truck and ballpark traffic on Terry A. Francois Boulevard.

As currently proposed, Illinois Street would be maintained in its current length, that is south from 16th Street. The existing dead-end section of Illinois Street north of 16th Street that presently allows access to the existing industrial facilities fronting the street and provides freight railroad right-of-way would be eliminated over time as those industrial uses were replaced with new development as part of project implementation. As discussed in Appendix D, Transportation, on p. D.6, Third Street is designated as a major arterial and a transit important street in the Transportation Element of the *General Plan*. Providing Illinois Street as a thoroughfare within such close proximity of Third Street would not allow for effective distribution of traffic in the East Subarea. Adjacent blocks of equal length would allow for optimal signal coordination for both eastbound and westbound directional traffic flows on 16th, South and Common Streets, and would therefore more effectively manage queues and distribute traffic to and from Third Street, a major arterial roadway.

If Illinois Street were extended between China Basin and 16th Street, the parcels between Illinois Street and Third Street would become very narrow, and it would be more difficult to develop them efficiently. Furthermore, Illinois Street, with one travel lane each way, would not provide the traffic capacity and lane flexibility that would be provided by Terry A. Francois Boulevard with two lanes in each direction. As planned by the Ballpark Transportation Coordinating Committee, Terry A. Francois Boulevard would be three lanes in the northbound direction and one lane in the southbound direction prior to a ballpark event, and then converted to three southbound lanes and one northbound lane after a ballpark event; thus, this future flexibility and carrying capacity would be compromised if



Terry A. Francois Boulevard were narrowed in order to accommodate an extension of Illinois Street. It should also be noted that the block of Illinois Street between 25th and César Chavez Streets is not accessible to vehicles, only to railroad freight trains. All traffic traveling south on Illinois Street is forced to turn left and enter Third Street at 25th Street to continue traveling south across the Third and César Chavez intersection. Thus, Illinois Street would not provide the desired connectivity proposed by the comment.

## Ballpark Circulation

### *Comments*

Page V.E.56: Pacific Bell Park: An analysis which claims that weekday afternoon games which end at 3:30 p.m. “would not coincide with the afternoon commute period” does so only by a narrow and outmoded definition of “commute period.” Though the ballpark project itself is out of the scope of the Mission Bay DSEIR, its overwhelming traffic and transit impacts to the transportation network under evaluation cannot be discounted. (*Richard Mlynarik*)

The SEIR anticipates that Berry Street between Third and Fourth Streets would be a two-lane street with parking on the south side, a 14.5 feet sidewalk on the south side and a 9.5 feet wide sidewalk on the north side. The Pacific Bell Park Transportation Management Plan anticipates that Berry Street between Third and Fourth Streets will be used as a pick-up/drop-off area for taxis and limousines. The block will also be used by pedestrians walking between the ballpark and the Caltrain Depot. The proposed 9.5 feet wide sidewalk may not have adequate capacity to handle the anticipated pedestrians flows. (*John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants*)

### *Response*

Comments suggest that the sidewalk (10 feet including the 6-inch curb width) proposed for the north side of Berry Street between Third and Fourth Streets may not be sufficient to carry pedestrian flows, particularly on game days. Comments also suggest that the impact from weekday afternoon games ending at 3:30 p.m. should be considered in the Mission Bay SEIR.

The Ballpark Transportation Coordinating Committee (BTCC) is currently developing strategies to manage pedestrian traffic after ballgames. The most likely pedestrian routes would be either southward across the Lefty O'Doul (Third Street) Bridge to parking lots located in Mission Bay South, or northward on King Street to the MUNI stops and the Caltrain terminal.<sup>6/</sup> Therefore, Berry Street to the Peter Maloney Bridge would be a less attractive route. Those pedestrians that do choose to walk along Berry Street would likely be distributed across the 10-foot sidewalk on the north side of the street and the 15-foot sidewalk on the south side of the street, a total of 25 feet for pedestrian travel.

In addition, on-street parking on the south side of Berry Street could also be prohibited during ballpark events if the BTCC decided to include this feature in its pedestrian controls, allowing an additional eight feet to be used by pedestrians, for a total width of 33 feet that would be available for pedestrian use. If pedestrian use of the parking lane were to be implemented, it would be most effective if pedestrian flows were segregated from vehicular traffic by means of temporary barriers or barricades placed along Berry Street. If the BTCC finds that it will be necessary to strictly minimize pedestrian flows on this portion of Berry Street after ballgames, temporary barricades could be placed on Third Street from the north end of the Lefty O'Doul Bridge to King Street as an extension of the permanent barriers to be provided on the bridge. This installation would reserve the northbound curb lane for pedestrians, and would direct pedestrians to travel north to King Street or south across the Lefty O'Doul Bridge.

The cumulative traffic and transit impacts of weekday afternoon games were evaluated as part of the San Francisco Giants Ballpark EIR, which contained a future year scenario very similar to the Mission Bay development program analyzed in this SEIR and included assessments of pedestrian and vehicular traffic. A summary of those results is provided in the SEIR on pp. V.E. 107-V.E.111. Substantial congestion during the coinciding early part of the weekday p.m. peak periods is predicted for high-attendance ballgames or events. Weekday afternoon ballgames would occur about 13 times per year (about 5% of weekdays); other non-baseball events will be scheduled to end before the start of the p.m. peak commute period. The main Mission Bay SEIR analysis is of a typical weekday p.m. peak hour scenario; most such days there would be no afternoon event in the ballpark.

#### Houseboat Access

##### *Comments*

There is an existing houseboat and recreational boat marina on the south side of China Basin Channel, located roughly between what would be the extension of Fifth and Sixth Streets. . .

Although the volume of trips generated by the marina are not great, the plan for Owens Street has the potential for a noticeable degradation of vehicular access to and from the community since there is no signal planned for the intersection of the planned access street and Owens. Consequently, residents of the houseboat community are going to face, certainly during peak hours, difficulties in entering Owens Street, with its forecast high volumes of traffic and possibly high traffic speeds. Turning movements to the east, which would necessitate traffic clearances in both directions, could be particularly difficult.

To avoid this loss of efficient vehicular access created by the project, and to insure the safety of marina residents and guests when they are both arriving and departing the community, is it possible to include an vehicle-activated signal at this access intersection? This signal could also, of course, incorporate a pedestrian crossing opportunity, as discussed elsewhere in this report. In addition to



providing the marina with improved and safe access, the signal's use would have the desirable effect of slowing traffic speeds on Owens Street. (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

The plan does not reflect any access to or from Owens Street for MCHA residents, guests or recreational boaters. The SEIR should address this, and also reflect the need for adequate traffic signals to permit MCHA users to cross Owens Street. Pedestrian access across Owens Street should also be shown. This is particularly important for residents whose mobility is impaired, and for children living on or visiting the Creek. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

### ***Response***

Comments note that the Mission Bay SEIR does not discuss access to the Mission Creek Harbor Association houseboats from Owens Street, and suggest that an actuated signal be provided at the access intersection with Owens Street to ease this access and slow the progression speed of vehicles on this portion of Owens Street.

Although the SEIR does not specifically state the type and location of access for the Mission Creek Harbor Association (MCHA) residents because it studies main intersections, roadway access to the houseboat area would be required as part of the Mission Bay project. The vehicular access to the MCHA parking area would be located approximately 400 feet equidistant from the roundabout and the Fifth Street pedestrian bridge. The project sponsor has met and discussed this issue with representatives of MCHA in several meetings. Owens Street is expected to carry relatively low volumes of traffic between Fourth Street and The Common, because other Mission Bay network streets would provide a less circuitous route for vehicles traveling to or from Mission Bay. The estimated future Annual Average Daily Traffic (AADT) for this section of Owens Street is 3,000 to 3,500 vehicles. This relatively low traffic volume is also reflected by the anticipated operation of traffic signals on this portion of Owens Street. On page V.E.70, the SEIR notes that the intersections of Owens Street with The Common, Third Street, and Fourth Street are expected to operate at level of service (LOS) B during the p.m. peak period in the year 2015.

Given the low traffic volumes expected from the MCHA parking area (there are approximately 50 parking spaces now and the same number is planned in the future), installation of a traffic signal would not be warranted. According to the Manual on Uniform Traffic Control Devices (MUTCD) a traffic signal would be warranted at this location if the minor approach (MCHA residents) generated at least 150 vehicle trips into or out of the parking area during the peak hour, or 80 vehicle trips per hour during any four hours of an average day. At the same time, the MUTCD would require that Owens Street would have to carry at least 1,500 vehicles per hour or 1,000 vehicles during any four hours of an average day. Since there would only be 50 spaces in the MCHA parking area and the

estimated peak hour volumes on Owens Street would be less than 500 vehicles, these minimum thresholds for a traffic signal would not be met.

A signalized pedestrian crossing at Fifth Street is included in Mitigation Measure E.47d (p. VI.30). The pedestrian crossing would be located near the Fifth Street Pedestrian Bridge, to provide continuity across Owens Street between the bridge and the residential units in the Central Subarea of Mission Bay South. The crossing would be located approximately 900 feet from Fourth Street and about 800 feet from The Common roundabout. It is included in the project and would provide adequate interruption of traffic flow for vehicles exiting the MCHA lot, approximately 400 feet to the west of the crossing. Owens Street, with open space on one side and residential areas on the other, is likely to have a maximum speed limit of about 30 mph. See also the response under "Pedestrian Safety" on pp. XII.150-XII.155.

#### King Street Frontage Road

##### *Comments*

The plan includes the King Street frontage road. If this road is constructed, it will require the taking of Caltrain land currently occupied by a track that is used for cleaning and maintenance of Caltrain cars. The SEIR should include an analysis of the impacts this will have on Caltrain operating and maintenance expense and on Caltrain's ability to deliver service reliably. It should also include alternatives without it. San Francisco Tomorrow has suggested several alternatives to this frontage road that give the access it is supposed to give and these should be included in the SEIR as alternatives. A copy of its letter to the Peninsula Corridor Joint Powers Board outlining these alternatives is attached. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

Page V.E.21: Traffic Circulation. There is no guarantee that the "planned westbound King Street frontage road to be built by the City on the north side of the I-280 ramps structure" will proceed, due to opposition to encroachment on Caltrain yards and right-of-way which may be necessary to support future rail service levels. Having no benefit other than to the Mission Bay developers, this project, should it proceed, should be undertaken by them and not at the direct expense of the City of San Francisco. (*Richard Mlynarik*)

I also notice on communications that they talk about if Berry Street is closed, that King Street access road, frontage road, rather, and north to the freeway right-of-way.

Well, that thing doesn't have any money for it. The San Francisco Transportation Authority has given it the last priority of projects that would be undertaken if money ever materializes.

It would also involve taking some Cal-Train land which is currently being used for the maintenance of their cars. And EIR should be revised to also reflect that. (*Norman Rolfe, San Francisco Tomorrow*)



### ***Response***

Comments suggest that there is no funding for the construction of the King Street westbound frontage road, that provision of the frontage road would require taking Caltrain property, and that this would impact Caltrain's operating and maintenance expenses, as well as its ability to provide reliable service.

The provision of the westbound King Street frontage road is part of an agreement between the City and County of San Francisco, Caltrans, and the Peninsula Corridor Joint Powers Board (JPB), which was created as part of the I-280 Transfer project and the Waterfront Transportation Project. The City and County of San Francisco has the responsibility to assure that the street is constructed. Although the early planning phases of the project included both the eastbound and westbound frontage roads, the eastbound frontage road was eliminated because of accessibility and safety considerations, and it was replaced with roadway improvements on Berry and Fifth Streets. As part of the proposed infrastructure plan for the project, Catellus would be responsible for funding and constructing the King Street westbound frontage road. Therefore, the fourth sentence of the first full paragraph on p. V.E.41 has been modified as follows:

**It [Berry Street] would also connect with the planned westbound King Street frontage road to be built by Catellus ~~the City~~ on the north side of the I-280 ramps structure.**

Peninsula Corridor JPB staff have been working with city staff on the Waterfront Transportation Projects including construction of the westbound King Street road. They have reached an agreement that involves upgrade and relocation of some track maintenance facilities (e.g., regarding sand and fuel supplies), rehabilitation of four tracks, and an easement exchange./7/ This agreement is expected to be presented to the Peninsula Corridor JPB for approval in September 1998.

### **Channel Bridges**

#### ***Comment***

The drawbridge operating regulations for the 3rd and 4th Street Bridges are included as 33 CFR 117.149 (encl. 4). In correspondence regarding related projects in the China Basin area, we have expressed our belief that overland traffic can be accommodated under the existing regulations without additional restrictions on waterway traffic. (*W.R. Till, Chief, Bridge Section, U.S. Coast Guard*)

### ***Response***

On p. V.E.72, the SEIR discusses the impacts associated with the operation of the Peter Maloney and Lefty O'Doul Bridges. The SEIR notes that the number of typical daily lifts is not expected to measurably affect the transportation circulation patterns in and near the Mission Bay Project Area, but

acknowledges that some vehicles will be delayed while the bridges are lifted. Although it was not explicitly stated, the determination that traffic circulation patterns would not be modified by the bridge operations was based on the assumption of typical lift operation procedures. Therefore, efforts to achieve effective circulation of Mission Bay traffic would not impose any additional restrictions on the operation of the Peter Maloney and Lefty O'Doul Bridges.

## Transit

### MUNI

#### Light Rail Extension

##### *Comment*

Page V.E.51: Light Rail Extensions: The DEIR claims that the future 2015 transit analysis is based upon operation of the Third Street Light Rail corridor as an extension of the J-Church line. However, MUNI's Third Street Draft EIS/EIR proposes to also extend the N-Judah line as far as Third and Mariposa Streets, explicitly to serve the Mission Bay development. According to page 2-39 of the MUNI DEIS/DEIR, fully ten vehicles of a total Third Street requirement of 25 streetcars—(40%)—would be required for this Mission Bay-exclusive service. This is a significant operational and financial (10 times \$3.7 million/vehicle) impact on the Municipal Railway, which is at present and for the foreseeable future unable to provide adequate levels of service on its existing network. (*Richard Mlynarik*)

##### *Response*

The comment notes that the additional ten light rail vehicles that would be required to provide the extension of N-Judah service to Mariposa Street would be a significant operational and financial impact on the Municipal Railway.

On pp. VI.28-VI.29, the SEIR discusses MUNI's inability to accommodate the expected northbound ridership on the MMX and Third Street light rail in year 2015. The SEIR notes that the mitigation measure which MUNI has found to be the most cost-effective calls for extending the N-Judah service from the Embarcadero station to the Mariposa Third Street light rail station to serve the Mission Bay Area (Mitigation Measure E.45, p. VI.28). Implementation of this mitigation measure would require ten additional light rail vehicles. With this mitigation measure, MUNI is expected to operate at 67% of capacity during the p.m. peak hour. The *Third Street Light Rail Project DEIS/DEIR* indicates that the capital cost estimate for this mitigation measure would be \$38,000,000, or about 10% of the total estimated capital cost of the Initial Operating Segment of the Light Rail Project (Table 7-10, p. 7-17). The Mission Bay SEIR acknowledges that a funding source for this mitigation measure has not yet



been fully identified. However, the *Third Street Light Rail Project DEIS/DEIR* indicates that MUNI and the City have identified combined revenues that may be available to fund the Initial Operating Segment (Table 7-17, p. 7-22 of the *Third Street Light Rail Project DEIS/DEIR*). This amount includes several potential sources such as Proposition B funds, state and federal funds and tax increment financing.

## Trolleybus Extensions

### Comments

Page V.E.52: Bus Service: No reason is given for the proposed changes to the 30/45 and 22 bus lines. (The Draft SEIR claims to be a “standalone” document and should not refer to “the prior Mission Bay development plan” as justification for dubious public transportation network changes.) It is unclear that the routing changes provide for the best levels of service to Mission Bay, and it is unclear that they will not degrade the levels of MUNI service elsewhere in the city. That the capital cost of the route modifications is estimated at \$30 million, that the City and County of San Francisco (through the Transportation Authority) and not the Mission Bay developers are responsible for these modifications, and that city funding for these modifications has not been identified is disturbing and constitutes a significant adverse impact to the Muni system. Should this project be funded by Muni, and should its ongoing operating deficits be underwritten by Muni, it will do so in competition with and at the expense of many other overdue transit improvement, maintenance, and rehabilitation projects throughout the city.

Moreover, these proposed route changes involve two different at-grade crossings of the Caltrain railroad tracks by trolley coach routes (at Mall/Owens Street and at Sixteen Street) which may have significant safety, regulatory and transit effects:

- Trolley bus wiring must physically clear any equipment which passes beneath it with an adequate safety margin. Present rail tunnels limit Caltrain equipment to a height of approximately 16' above rail level, but plans have been discussed to operate full 22' height rail container trains to the Port of San Francisco. Typical civil engineering practice calls for structures to lie 23 or more feet above railroad tracks.
- The trolley bus poles must be able to physically maintain contact with the wires which provide the buses' power. The hydraulic trolley pole retractors on Muni's fleet have a height limit of approximately 20'6". However, when operating near maximal vertical pole extension trolley bus movement is *severely* constrained laterally by the need to maintain wire contact. This has both operational and safety impacts, by limiting the lane-changing maneuvers the trolley bus may take to avoid obstacles, a dangerous limitation at a multi-track railroad crossing.
- Special technical provision must be made so that the derailment of trolley bus poles from their feed wires is either impossible or does not prevent emergency motion of the bus. Otherwise, the not-uncommon occurrence of trolley derailment becomes a life-threatening situation when it occurs at a rail grade crossing.

- Operation of close-headway, heavily-used, city-traversing routes such as the 30/45 and the 22 through low-service-level intersections (such as Sixteenth/Seventh and Mall/Seventh) and immediately across a rail right-of-way which may be blocked for minutes at a time by trains from either direction will exacerbate the chronic service reliability and “bunching” problems typical of those routes and cause service interruptions which will extend for the entire length of the bus lines.
- Alterations to these routes do not appear to be coordinated with any comprehensive plan for Muni service to the South of Market area. Ad hoc alteration of routes to serve particular developments without consideration of the changing service needs of the surrounding areas will lead to expensive redesign and reconsideration, almost certainly at the direct cost of transit customers and taxpayers.
- At-grade trolley bus crossing of the Caltrain line involves major, and perhaps insurmountable, technical and regulatory interactions with the planned electrification of the Caltrain line. Such crossings of low-voltage (600VDC) city transit lines by high voltage (25000VAC) railroad catenary are technically possible, but are exceptional, and where they historically exist (in limited numbers of European cities) they are being phased out. I have researched this problem and know of no plans to construct new crossings of this type anywhere in the world.

The California Public Utilities Commission should be contacted for information on the safety and regulatory issues associated with at-grade crossing of railroad tracks by trolley bus lines. A railroad electrification engineering consultant should be contacted for information on the technical and regulatory feasibility of at-grade crossing of electrified railroad by trolley bus lines. Realistically, the plans for such crossings should be abandoned, just as all at-grade railroad crossings should be avoided. (*Richard Mlynarik*)

The most important transit service elements are the service expansions planned for the Municipal Railway. Two important mitigation features “assumed” to be part of the Mission Bay project are the extensions of the 22 Fillmore and 30 Stockton Lines (pages V.I.15-18). The DEIR indicates that neither of these extensions is currently funded, nor is either project in the current Municipal Railway Capital Improvement Program or Short Range Transit Plan. Although the DEIR indicates that Railway staff believes that the 22 Fillmore Line could be extended by as early as 2003, in conjunction with the implementation of the Third Street light rail project, the absence of the project in key Railway documents is not encouraging.

- a. Will the Municipal Railway take steps, in conjunction with the Third Street light rail project, approval of the Mission Bay project, or both, or incorporate the extensions of the 22 Fillmore and 30 Stockton Lines into its capital programming and planning documents?
- b. Are capital funding sources available which can be allocated to the implementation of the 22 and 30 Line extensions according to a schedule which coincides with the build-out of Mission Bay?
- c. Does the probable effort to re-authorize and extend the City’s one-half cent sales tax present an opportunity to establish an assured funding source for the needed Municipal Railway improvements set forth in the Mission Bay plan? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)



The DEIR indicates that Muni trolley coach lines will be installed over Caltrain tracks at 16th Street and the proposed Common Street (Mall Street) grade crossings. At a minimum, the clearance of the trolley coach wires over the Caltrain tracks will be subject to the requirements of California Public Utilities Commission General Order Number 95.

Caltrain is also studying electrification of the railroad. Electrification would entail installing a catenary wire above the Caltrain tracks. Any proposed work, such as the proposed Muni trolley coach lines, should not preclude the electrification of Caltrain in the future. (*Darrell J. Maxey, P.E., Chief Engineer, Caltrain*)

### ***Response***

Comments request justification for the proposed changes to the 30/45 and 22 bus lines, and suggest that the at-grade crossings of the Caltrain tracks associated with these route modifications may have substantial safety and regulatory issues. Comments also inquire about the possible incorporation of the modifications to the 22 and 30 bus lines into MUNI's capital programming and planning documents, and the identification of possible funding sources. Comments discuss engineering issues associated with the trolley wires crossing the Caltrain tracks, note that the delay incurred by trolley buses at rail crossings will create on-time performance problems, and suggest that the route modifications were not considered as part of a comprehensive service plan.

The rerouting of the 22-Fillmore and the extension of the 30-Stockton or the 45-Union/Stockton trolley bus services into and through the Mission Bay Area have been planned by MUNI for the last few years, in response to expected increases in Mission Bay transit demand. (As indicated in Table V.E.7, p. V.E.61, the estimated daily transit ridership for the Mission Bay project would be about 67,500 passengers.) These route modifications are part of MUNI's overall transit plans to serve San Franciscans, and were assumed for the MUNI *Third Street Light Rail Project EIS/EIR*.

Both route modifications are described in MUNI's Short-Range Transit Plan (SRTP) and Capital Improvement Program (CIP), where their cost is estimated at \$30 million. The CIP also states that they are not currently funded through the year 2005, although applications are being made to MTC by the San Francisco Transportation Authority to fund replacement of the trolley bus fleet, in part to meet the Mission Bay transit demand (see p. V.E.53). If the reauthorization and extension of the City's Measure B one-half cent sales tax were to occur, it would provide for additional funding for these and other MUNI projects, through the San Francisco Transportation Authority. MUNI's SRTP and CIP are prepared for the entire City transit system and take into account service needs and priorities for the entire City. Therefore, it is not expected that the planned rerouting of the 22-Fillmore and 30-Stockton bus lines would cause substantial degradation of service in areas presently served by these lines. As explained on p. V.E.52, the proposed route for extension of the 30-

Stockton is planned in such a way as to replace a portion of the 22-Fillmore route. Thus, MUNI plans to continue to serve the entire area now served by the 22-Fillmore, rather than eliminating service. This is typical of MUNI's citywide approach to transit planning.

The statement in the first sentence of the first full paragraph on p. VI.18, which indicates that these two route modifications are not in the SRTP or the CIP, has been clarified as follows:

**MUNI ~~does not have~~ describes these two transit features in its current Capital Improvement Plan ~~nor are they programmed~~ and in the Short Range Transit Plan, although they are not currently programmed or funded through 2005. The Capital Improvement Plan estimates the total cost of these trolley bus route modifications to be approximately \$30 million. Applications are being made to MTC by the San Francisco Transportation Authority to fund replacement trolley bus fleet, in part to meet the Mission Bay transit demand. MUNI staff has indicated. . .**

The infrastructure plan that is proposed to be part of the Owner Participation Agreement between Catellus and the Redevelopment Agency is expected to indicate that MUNI intends to extend lines 22-Fillmore, 30-Stockton and 45 Union/Stockton to serve the Mission Bay South area. Catellus would be responsible for installing overhead line poles and/or eyebolts on buildings in the Mission Bay South area to support new trolley wire.

As indicated by one comment, the installation of trolley coach wires over the Caltrain tracks will be subject to the requirements of California Public Utilities Commission (CPUC) General Order (G.O.) Number 95 which contains the rules and regulations for overhead line construction. Section VII of CPUC G.O. No. 95, which covers the specific requirements for trolley wires, states that the vertical clearances above rails for trolley contact wires should be 19 feet for those railways which do not transport or propose to transport freight cars. This value has to be increased to 22.5 feet where railways transport or propose to transport freight cars, such as Caltrain. MUNI staff has indicated that installation of trolley coach wires at 22 to 22.5 feet in height is feasible<sup>8/</sup>, although it would constrain the vehicle's lateral movement. In the very preliminary work conducted by MUNI regarding the extension of trolley bus service into Mission Bay, it was assumed that the wires would be installed at those heights.

The existing arched railroad tunnels in San Francisco physically limit Caltrain's equipment and freight rail service to approximately 16 feet above the top of the rail, which may allow for project designers to use the lower 19-foot height requirement imposed by the CPUC G.O. No. 95 on passenger-only



railroads. The comment indicating that the Port of San Francisco and the Peninsula Corridor JPB have evaluated the possibility of operating double-stacked container railcars to Pier 80 is correct. This train configuration would require 22-foot clearances. Because of the limitations imposed by the tunnels, gauntlet rails would have to be installed in the center of the tunnels to take advantage of the extra height in the center of the arch to accommodate double-stacked freight trains. To establish gauntlet rails, the two rails closer to the center of the arched tunnel (one from each track) would be replaced by a special type of rail that allows trains to operate these inner rails instead of on either set of outer rails. Thus, when passenger service is not in operation, generally between 1 a.m. and 4 a.m., freight trains would operate on those tracks. This design approach has technical obstacles, particularly at rail switches and track crossings. If double-stacked train cars were to be used, a 22- to 22.5-foot clearance could be provided by MUNI trolley wires, as noted above.

The installation of trolley coach wires over the Caltrain tracks would also have to be compatible with the potential electrification of Caltrain passenger service in the future. Because of the height limitations imposed by the arched tunnels and discussed above, and the fact that MUNI trolley buses can operate at wire heights of 19 to 22.5 feet, trolley crossings, which operate at 600 volt DC, would not preclude the potential electrification of Caltrain, which would operate at 25,000 Volt AC. The CPUC G.O. No. 95 describes in detail the requirements for the installations of wires and insulators to make such a crossing possible. MUNI staff have indicated that although MUNI has yet to conduct a detailed analysis of the crossing assuming Caltrain service is electrified, they believe the wire crossing is technically feasible. All new trolleybuses being acquired by MUNI have auxiliary power enabling them to travel limited distances without being attached to the overhead wires. Thus, the possibility of a trolley derailment occurring at the railroad crossing would not compromise passenger or driver safety./9/

In regard to the potential "bunching" of buses at the crossing as a result of the crossing being closed because of frequent train service, the SEIR assumes that, in the year 2015, a total of 12 trains would enter a railroad crossing during the p.m. peak hour (eight in the southbound direction and four trains in the northbound direction, as indicated on p. V.E.17 and V.E.86). This means that the crossing would be closed to through traffic for a total of approximately 18 minutes during the p.m. peak hour, about once every three to four minutes. It is expected that since the crossings are relatively close to the end of the trolley bus lines, MUNI schedulers would be able to account for the potential railroad-caused delays in the layover times at the end of the lines so that their effect on the service is minimized.

## Suggested Revisions from MUNI Staff

### Comments

Our most critical and substantive comment relates to the way in which Mission Bay's ridership impacts on MUNI service—and especially MUNI Metro service—are characterized in the document. The Mission Bay document does not appear to be in synch with the Third Street EIS/R in terms of ridership impacts from Mission Bay. Below I cite the clearest example of where there are problems, but I hasten to add that there may well be other areas in which the ridership figures do not agree [commentor's emphasis].

Table V.E.16 describes the impacts of the MB project on northbound rail service:

- The third row is labeled "MMX, Third St. LRT (northbound)." I presume that this refers to the future J line service (from the Third Street Corridor into the Market Street Subway) as well as the L line service on the MMX. The first column indicates an hourly capacity of 3,570 [passengers], which is consistent with thirty 119 [passengers] LRV's per hour, which is what the J and L would provide. If this is correct, the table should indicate more clearly which lines are assumed here.
- The second column [of Table V.E.16], "cumulative trips without project" shows 1,400. This number appears to include only the *Third Street trips* projected for 2015 and does not include other "pure" MMX trips attracted and generated by the Caltrain depot and other uses along The Embarcadero. Assuming this is correct, this column greatly undercounts the percentage capacity on the rail lines which is already used up before Mission Bay trips are added.
- The third column [of Table V.E.16], "Project Trips" shows 2,600 trips in the northbound direction for the pm peak hour and 300 in the southbound direction for a total of 2,900 rail trips generated by Mission Bay. Page V.E.75 say "MUNI Metro is anticipated to carry approximately 3,890 trips during the same time period [i.e., pm peak hour]." What is the cause of this 1,000 trip discrepancy? Further on this item, MUNI's numbers for Third Street project a total of 52,065 daily rail trips (Third St. + MMX) generated by Mission Bay (Table 4 in Third Street Travel Demand Forecasting Results Report). Is this number equivalent to the 3,890 pm peak hour trips used in the MB EIR? It may be, but the 3,890 does seem quite low for a daily total of 52,065. You asked about this in your memo of 10/17, but I have not seen where it is addressed in this current document. You raise a question in the same memo regarding how pm peak hour trips are derived from daily totals. Since our numbers are in daily totals and the MB document uses pm peak hour figures, it would be difficult to reconcile the two, even if they were indeed in synch.
- The figure of 112% for percent capacity used in the last column [of Table V.E.16] thus seems very much lower than it should be. The correct figure should be considerably higher, which should be more consistent with the findings of our consultants Korve and Padron that significantly increased service over that provided by the J and L lines would be required to serve Mission Bay. . .



[Page] V.E.18 In the last paragraph [the discussion of the MMX should] mention the current shuttle arrangement.

[Page] V.E.19 At the top of the page—mention also the Folsom/Embarcadero and the Brannan/Embarcadero stations?

[Page] V.E.45 1st paragraph—1st sentence should read “Third Street Light Rail Project.” (no “Extension” and capitalize “Project.” The three alternatives should be described as “No Project,” “No Build/Transportation Systems Management (TSM),” and “Light Rail Build.” In the second paragraph, place “4th Street” in parentheses after “Peter Maloney Bridge.”

[Page] V.E.46 1st full paragraph—is it appropriate to also mention the N-line extension here? It’s considered a mitigation in this document. Should the document also mention possible mixed flow in Bayview as an exception to dedicated right-of-way?

[Page] V.E.47 1st paragraph—should the document mention the other proposed bus route changes as part of the Third Street project other than the 9X, AX, BX? Is the Townsend variant for the 30-line extension still alive?

[Page] V.E.49 2nd paragraph—should a possible N-line connection between the Parnassus and MB campuses be mentioned in connection with the need for a shuttle?

[Page] V.E.50 1st full paragraph—is it true that moving the Transbay Terminal would have little or no operational effect on MUNI service between downtown and MB? (*James D. Lowé, Transit Planner, San Francisco Municipal Railway [letter from Ken Rich, MUNI Third Street Light Rail, attachment to Mr. Lowé’s letter]*)

### **Response**

The comments imply that the way in which Mission Bay’s MUNI ridership is assigned to MUNI Metro capacity may not be consistent with the *Third Street Light Rail Project DEIS/DEIR*. These comments refer to a prior preliminary review draft document; therefore they do not reflect the analysis and results included in the SEIR, which is consistent in terms of MUNI ridership and capacity with the *Third Street Light Rail Project DEIS/DEIR*.

All of the revisions to the preliminary review draft requested by MUNI staff were made before the Mission Bay Draft SEIR was published. Some of the comments about Table V.E.16 call for clarification, provided below.

Table V.E.16 in the SEIR, on p. V.E.95, is an assessment of the impacts of the project on MUNI service in the *immediate vicinity* of the project during the p.m. peak hour in both the outbound (higher load) and inbound (smaller load) directions. Table V.E.16 represents a microscopic analysis which includes values that correspond to maximum load points near the Project Area. For

northbound rail service, this is in the vicinity of The Embarcadero and King Street, and for southbound rail service, this is near Mariposa Street. These points were located from the Third Street Light Rail *Project Travel Demand Forecasting Results* data cited in the table. Consequently, the passenger loads described in this table do not reflect the impact of the project on MUNI service at the screenlines shown on Figure V.E.6 in the SEIR, but reflect the more focused impact of Mission Bay passengers on MUNI lines in the immediate vicinity of the Project Area.

The number of p.m. peak hour cumulative trips without the project that was shown for the E-line and Third Street light rail in the internal review draft version of the table (northbound) was 1,400. That number was not changed in the published Draft SEIR. For Third Street light rail riders, the number includes the non-Mission Bay two-hour p.m. peak period riders indicated at The Embarcadero and King Street in the Third Street Light Rail Project report (713 passengers/10/) times a 60% conversion factor from the p.m. peak period to p.m. peak hour. The MMX riders were estimated to be 75% of the total cumulative p.m. peak hour loads for the MUNI express lines to Caltrain (80X, 81X, and 82X), combined (913 passengers/11/). For the published Draft SEIR the table was expanded to show southbound MUNI Metro travel as well, for a total on the MMX lines of 2,200.

#### UCSF Shuttle

##### *Comments*

And lastly, for now, the time I have left, the transit -- it talks about transit to UCSF area but not within the UCSF area. And as mitigation measures, you should address some sort of internal circulator or shuttle inside the UCSF area. (*Norman Rolfe, San Francisco Tomorrow*)

The DEIR (page V.E.56) points out that UCSF currently has an arrangement with the Golden Gate Bridge, Highway, and Transportation District (Golden Gate) which provides bus service between the UCSF Parnassus Campus and service areas north of the Golden Gate Bridge, and that this service " . . . is expected to be modified to travel to the new UCSF site in Mission Bay if demand warrants." Direct, or nearly direct, bus service would certainly encourage use of transit. Is it possible to make this service available to other (non UCSF employees) Golden Gate commuters working in Mission Bay? Would UCSF and Golden Gate be willing to examine this possibility? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

In addition to the increased Muni service within the project area described in the SEIR, there should also be a description and analysis of a local transit system (a shuttle or local circulator system) within the UCSF area connecting with Muni and Caltrain. Such a system should be analyzed as a mitigation measure for the automobile traffic that will be generated by this project. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)



### ***Response***

Comments request a description and analysis of a UCSF shuttle bus system as a mitigation measure for traffic conditions created by the project, and suggest that UCSF and Golden Gate Transit explore the possibility of making the UCSF Club Bus Service available to all Mission Bay employees commuting from the North Bay.

As noted on p. V.E.56, the SEIR discusses the shuttle bus service that UCSF currently operates between various San Francisco campuses, and on pp. VI.31-VI.32, the SEIR notes that most of the measures that are a part of UCSF's Transportation Management Plan are expected to be expanded to serve UCSF facilities in Mission Bay. UCSF development would be implemented through the UCSF Long Range Development Plan, which includes a transportation element describing transportation demand management measures. One of these measures is the UCSF shuttle bus service. In addition to connecting the other UCSF campus sites, shuttle buses would travel within the Mission Bay UCSF site serving as an internal public transit system. Preliminary ideas presented by UCSF and included in the UCSF Mission Bay Preliminary Campus Development Plan (April 1, 1998) call for shuttle buses to travel on 16th Street, Owens Street, Fourth Street, and internal campus streets.

The UCSF Club Bus service provides transportation to members, and to non-club members if available capacity permits. Club members pay a monthly fee for the transit service, and non-members pay on a one-way, round trip, or weekly basis. The subscription bus service is available to anyone, but capacity and stops are limited.

It is likely that if demand exists from other major employers in Mission Bay they would make their own arrangements with Golden Gate Transit in order to establish their own Club Bus service. The possibility of such arrangement is described in the SEIR as a component of Mitigation Measure E.47, the Transportation System Management Plan. Catellus intends to implement the shuttle service to regional transit stops included in Measure E.47a; other components of Measure E.47 would be considered by decision-makers and implemented by the Transportation Management Association if warranted.

### **Transbay Terminal**

### ***Comments***

Page V.E.55: Transbay Terminal Replacement and Possible Relocation: Transport analyses undertaken by AC Transit and by other interested parties indicate that destruction and relocation of the Transbay Terminal would have a significant negative impact on transbay bus service by degrading intermodal connectivity, *decreasing* operational flexibility, and limiting future levels of service. As

such, the DSEIR assumption that "relocation of the Transbay Transit Terminal would not change existing transit travel characteristics" is extremely dubious, and possible destruction of the terminal should be accounted negatively against Mission Bay transit modal split and as a contributor to higher traffic congestion levels. (*Richard Mlynarik*)

On page VI.27, the DEIR proposes Mitigation Measure E.44, recommending an expansion of the District's transbay service. The District supports this mitigation measure. However, on page V.E.35 of the DEIR the following statement appears:

"The main emphasis in the City's Transportation Element is to support use of transit rather than the automobile as a means of travel within the City and as a means of commuting between San Francisco and other Bay Area locations. Therefore, objectives in the General Plan call for maintaining San Francisco as a hub of a regional, city-centered transit system with no increases in the capacity of major highways and bridges except for high-occupancy vehicles, and maintaining transit as a primary means of travel within the City."

In order to accomplish the above statement and Mitigation Measure E.44, the DEIR should include a mitigation measure supporting the existing Transbay Transit Terminal location and the maintenance of the existing loop ramp system. The proposed new terminal is not located at a site which would encourage transbay transit use, nor has it been designed to accommodate the potential growth in transbay service suggested in this DEIR (even at the 80% level used in the DEIR). To accommodate even the existing level of AC Transit's transbay service, the facility would have to be at least three stories, thereby substantially increasing the costs of the facility. No operational analysis has been performed to indicate that the proposed terminal and its ramp(s) could handle the volume of traffic and number of commuters the existing terminal has handled in the past and can handle in the future. The DEIR has not analyzed or considered any of these issues. (*Kenneth C. Scheidig, General Counsel, Alameda-Contra Costa County Transit District*)

The proposed relocation of Transbay Terminal is treated lightly. It is claimed on page V.E.55 that it will have no effect on regional transportation. SFT disagrees. Since it is proposed to move the terminal to a location less convenient for most of its users, this could lead to a decrease in ridership on AC Transit and possibly other regional and intercity carriers (e.g. - Greyhound). This in turn would cause increased automobile travel in the region and could very well affect traffic and travel to the Mission Bay Area and other parts of the city. It should also be pointed out that the proposed Beale and Howard Terminal will have a smaller capacity than the existing Transbay Terminal and hence will not be able to handle the increased numbers of people that will be coming into San Francisco in the future. This means that the increases in the automobile traffic in the future will be even greater than the SEIR predicts. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

### **Response**

Comments question the assumption that the relocation of the Transbay Transit Terminal would not change existing transit travel characteristics, suggesting that higher traffic congestion levels would result, and that the reduced capacity of the proposed terminal would not be able to accommodate



either the volumes of traffic that the existing terminal can accommodate, or future anticipated volumes.

The SEIR considers the effect on Mission Bay of possible relocation of the Transbay Transit Terminal. Replacement of the existing terminal is the subject of ongoing analysis and discussion, and is not part of the proposed Mission Bay project. Adoption and implementation of the Mission Bay project would not preclude retention of the existing terminal, replacement of the terminal on its present site, or replacing it on a different site at Main and Beale Streets.

On p. V.E.55, the SEIR acknowledges that the “Construction of a new Transbay Transit Terminal facility could influence the service provided by various regional transit agencies, and consequently affect transit travel to and from Mission Bay.” Because a new terminal at the Main/Beale site would be approximately the same distance from Mission Bay as the current terminal, travel characteristics in terms of travel time, service reliability and ridership to and from Mission Bay would not be noticeably affected. Potential changes in transit ridership and resulting mode split changes from cost, location, functionality, or other factors involved with a transbay terminal replacement/relocation would be effects of that project and not the Mission Bay project, and will be analyzed and disclosed in the environmental impact report in preparation by the City which will examine reconstruction/replacement of the existing terminal as well as relocation. The Metropolitan Transportation Commission has also embarked on a study of the terminal. At this time, the decision as to whether the terminal will be replaced in its existing location or relocated is likely to be at least 18 months away.

#### AC Transit

##### *Comments*

Page V.E.82: AC Transit impacts: Likewise, the assumption that the loads on more than two dozen different bus routes and a hundred or so different bus departures are redistributable is wrong. Though *average* transbay bus loading may increase from 83% to 91% under the study assumptions, loads will be well over 100% on certain routes and runs, with consequent effects on AC’s operations and resources. . .

Page V.E.86: AC Transit 2015 Scenario: This section should be updated to reflect the adoption of the AC Transit Transbay Comprehensive Service Plan. The discounting of AC’s growth estimate is too glib and serves the interests of the Mission Bay developers too well: as AC’s Draft Comprehensive Service Plan states (page 35, “Future Corridor Projections: BART Capacity”) “BART *figures* show that the estimated 2010 figure [total daily ridership] would approximately equal the *total* available daily seated capacity.” BART may, as the Mission Bay SDEIR claims, “be able to accommodate more transbay growth demand than AC Transit predicts,” but that growth is largely

from outlying stations, resulting in over-capacity trains by the time they reach much of the AC Transit district traveling inbound. AC's assumption that its service will disproportionately feel the effects of BART crush loadings seems valid. (*Richard Mlynarik*)

On pages V.E.86 and 87, the Draft EIR discusses the potential impacts of the project to AC Transit. In this analysis you have considered a growth rate of 80% between 1997 and 2010. Based on BART's Short Range Transit Plan BART suggests that it will be able to accommodate more transbay demand growth than AC Transit predicts. The District believes the 80% figure is conservative and should be higher. Recent newspaper articles regarding the delays in BART's computer system upgrade, which is essential to operate the shorter headways, and the additional costs must be considered. Furthermore, as the BART system ages, it has experienced more frequent service interruptions. Since the District's Transbay Comprehensive Service Plan emphasizes service to areas in the East Bay that are under served by BART, the District believes the DEIR should consider a higher percentage of growth in the District's transbay service than the 4.6% yearly growth used on page V.E.87. (*Kenneth C. Scheidig, General Counsel, Alameda-Contra Costa County Transit District*)

The DEIR finds (Section V.E) that the project's cumulative demand upon regional transit providers creates significant impacts only upon the transbay services provided by AC Transit. The DEIR points out that inasmuch as AC Transit is not within the "jurisdiction" of the City and County of San Francisco (CCSF), mitigation of this impact is beyond the ability of the SF Redevelopment Agency or Catellus to assure. Therefore, given that assumption, the proposed (AC Transit) mitigation measure (E.44, page VI.27) is a reasonable place to begin.

However, the DEIR's travel forecast finding (page V.E.87) that AC Transit's service supply will be affected with respect to serving Transbay trips generated by Mission Bay is important since it reflects an opportunity to seek ways to encourage even greater ridership on AC Transit. Certainly this should be an important focus of mitigation efforts given the forecast traffic congestion associated with use of the Bay Bridge. The question, then, is what might be done, by the project sponsor and/or by AC Transit, to provide improvements to AC service which would encourage a higher level of transit ridership than that forecast in the DEIR ? . . .

- a. What would the ridership impacts be upon the use of AC Transit by trips generated in Mission Bay if certain AC Transit bus lines were extended beyond the Transbay Terminal to directly serve Mission Bay?
- b. Would such service improvements mean actual increases in the number of Eastbay residents working in Mission Bay and taking AC Transit simply because direct, convenient transit service were offered?
- c. Would the extension of AC services to Mission Bay be less costly, in terms of marginal operating costs, than the provision of a Mission Bay shuttle service serving AC Transit at the Transbay Terminal?

Extending some number of AC Transit lines through the Transbay Terminal to direct service points in Mission Bay would mean increased operating costs to AC Transit, and might require additional vehicles as well. If funding is to be provided by Catellus or project developers in Mission Bay for



traffic mitigation measures, can such sources be tapped for transit capital funding needs as well? Could an assessment district be considered to provide a source of funding for on-going operating costs to regional transit providers, notably AC, to support their increased Mission Bay services? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

### ***Response***

Comments suggest that the assumed 80% growth (4.6% annual growth) in AC Transit ridership is too low, that the impact of Mission Bay-generated AC Transit ridership is understated by distributing it across all AC Transit Transbay p.m. peak hour capacity, and that the growth rate projected for BART is too high. Comments also suggest that the SEIR provide an assessment of impacts and cost of extending certain AC Transit bus lines beyond the Transbay Terminal to directly serve Mission Bay.

On p. V.E.87, the SEIR explains that the 80%-110% growth in AC Transit ridership predicted by AC Transit is based on the assumption that much of BART's planned additional Transbay capacity would occur on the Castro Valley and Dublin/Pleasanton line. However, BART's Short Range Transit Plan (FY 1997-2006) indicates that the projected additional capacity provided by a maximum of 27 Transbay trains per hour is planned for all four Transbay lines, with only 46% of the additional capacity being allocated to the Dublin/Pleasanton line. Thus, the AC Transit and BART projections of growth present somewhat conflicting pictures. The Mission Bay SEIR assumes that BART will be able to accommodate more of the transbay increase in ridership than AC Transit predicts. Furthermore, the most recent AC Transit ridership estimates that are noted in Table V.E.13 reflect post-BART strike ridership on AC Transit buses, which increased substantially. However, AC Transit had not reevaluated expected ridership growth rates based on the updated ridership estimate. Therefore, the 80%-110% growth estimated by AC Transit was determined based on a lesser existing ridership than used in the SEIR; in effect the base ridership used in the SEIR already accounts for some growth. The combination of the increased existing ridership and the indication that BART plans to increase capacity across all Transbay lines was the basis for the use of an 80% (4.6% annual) ridership growth rate for AC Transit as an assumption appropriate for SEIR purposes. This growth in AC Transit ridership takes into consideration the fact that BART's capacity may not grow evenly among its lines. As indicated in the SEIR, almost half of the additional capacity would be allocated to the Dublin/Pleasanton line, with less expansion on the other lines.

The SEIR also acknowledges on p. V.E.87 that the assumption that "because the arrival of passengers to the Transbay Transit Terminal is not likely to be evenly distributed throughout the p.m. peak hour, and because each transbay bus represents a particular bus line that may capture more or less ridership demand than other lines, the passenger loads are unlikely to be the same on each transbay p.m. peak hour bus." The number of additional standees on each bus that were generated by the Mission Bay

project are likely to be more or less than the average additional three standees per p.m. peak hour transbay bus that is noted in the SEIR. If the analysis were to assume that the additional AC Transit transbay p.m. peak hour ridership created by Mission Bay were distributed to each transbay line proportionally to the existing average peak period load for each particular line, the greatest number of additional standees per bus from the project would be five, two standees more than indicated by the analysis methodology used in the SEIR.

The extension of transbay buses beyond the Transbay Transit Terminal to directly serve Mission Bay would most likely make transit more convenient for those individuals traveling between Mission Bay and the East Bay. The extension of AC Transit service would eliminate the need for passengers to transfer between AC Transit and MUNI or a shuttle bus, and therefore, individuals may be more inclined to take transit to and from Mission Bay. An agreement would be needed between AC Transit and the City to permit AC buses to use City streets. Mitigation Measure E.47a, on p. VI.30, identifies use of shuttles from the Project Area to regional transit centers; these shuttles would be a more efficient way to transport travelers from the Project Area to the AC Transit terminal than an extension of AC Transit service to Mission Bay because one shuttle could carry several passengers destined to different parts of the East Bay and therefore using several different AC Transit lines, as well as passengers whose destinations are served by other carriers. Since shuttles would be more efficient, AC Transit service extension to Mission Bay was not identified in the SEIR as a possible mitigation measure, and no analyses have been conducted about the capital or operating and maintenance costs that would be incurred by AC Transit if service were to be extended to Mission Bay because economic impacts are not a necessary component of EIRs (see CEQA Section 21151 (b) and State CEQA Guidelines Section 15360).

## BART

### *Comment*

Page V.E.86: BART 2015 Scenario: Though BART (optimistically) plans to increase the peak number of trains operating hourly through the Transbay Tube/San Francisco bottleneck from 18 to 24 (not 27) over the next decade, the agency also plans to cut the lengths of the trains from 10 to 8 cars, as the greater number of trains would require more equipment than the agency can provide and the shorter trains are predicted to provide better and more uniform passenger loadings. BART has not announced or budgeted for a significant new rail car purchase plan. So the planned service increases represent a 7% increase in capacity (20% at 27 trains/hour), not the 50% stated in the DSEIR, and the 125% *average hourly* load factor in Table V.E.13 should be at least 156%. (*Richard Mlynarik*)



### ***Response***

According to the BART Short Range Transit Plan for fiscal years 1997-2006, BART plans to be able to operate a maximum of 27 transbay trains per hour by the year 2001. The Short Range Transit Plan also indicates that BART plans to utilize modular train sizing to change midday train lengths from the peak period lengths of ten cars per train for the Richmond and Pittsburg/Bay Point lines, eight cars per train for the Fremont line, seven cars per train for the Dublin/Pleasanton line, to shorter trains.<sup>12/</sup> The increase in BART's transbay service capacity presented in the SEIR is based on these assumptions.

### **Caltrain**

#### ***Comments***

Page V.E.7: Caltrain ridership is now over 28,000 per weekday (May 1998 Caltrain Director's Report) and continues to increase at double-digit annual percentage rates. . .

Page V.E.53: Caltrain Downtown Extension Project: It is unclear whether the Mission Bay analysis includes increases in Caltrain service frequency (an additional 20 trains per day), Caltrain electrification, and other non-extension measures which are part of the Caltrain Downtown Extension DEIR. In addition, no mention is made of other rail services in the Caltrain corridor, including potential High Speed Rail and Dumbarton rail service. (The present Dumbarton rail service plan under study by the San Mateo Transportation Authority involves eight northbound a.m. and eight southbound p.m. services into and from San Francisco.) Even pessimistically discounting High Speed Rail and the Downtown Extension itself, service frequency on the corridor can be expected to increase significantly within the Mission Bay planning horizon, with consequent impacts on the local transportation network, and in particular on street grade crossings. . .

Page V.E.81: Caltrain impacts: The analysis assumes that all "peak hour" Caltrain departures are interchangeable and that loads are averaged between them. This is not so: Caltrain operates a mixture of limited-express and all-stops services, and limited-stop services have high load factors operating into and out of the San Francisco terminal. The claimed "largest" passenger loading of 70% is incorrect (it contradicts Table V.E.12's claim that the 71% of hourly capacity is used) and should be updated according to current Caltrain passenger counts, and the assumption that additional loadings would be distributed evenly among trains dropped. In reality, excess loading is more likely to lead to a drop in transit mode split than it is to load shift to slower and less desirable services. . .

Table V.E.13: Caltrain year 2015 scenario: The assumption that two additional five-car trains would be available for peak-hour service is not supported by Caltrain's recent equipment order. At most, four-car trains should be assumed.

Page V.E.84: Caltrain 2015 Scenario: Again "maximum load factor" and "average hourly load factor" are confused. Again, not all Caltrain trips are identical, and Caltrain departures are not sufficiently closely-spaced that identical trips are interchangeable (as they would be on BART-like twelve-minute headways). The conclusion, based on these assumptions, that Mission Bay demand

would not cause capacity problems is unsupportable. The "73% [Caltrain] increase in capacity planned by 2010" appears to be a Mission Bay planner's assumption and is not supported by Caltrain's rolling stock acquisition. Regardless of this, the projected Mission Bay project additions to Caltrain would push the *average* load from 90% to 96%, which indicates that a number of services will operate at above capacity. Even using optimistic assumptions of Caltrain's future capacity, this is a significant impact on the system, the mitigation of which will require substantial capital investment in new equipment. (*Richard Mlynarik*)

However, other opportunities for improved transit services, either only mentioned in passing or not covered in the DEIR, should be explored in terms of their benefits and mitigating effects. The Subcommittee wishes to take this opportunity to provide, in addition to comments on the transit elements addressed in the DEIR, suggestions on other ideas for transit investments which may lead to increased transit use and reduced reliance upon the automobile.

1. The peninsula commute train (Caltrain) provides a readily available service, particularly for peak hour commute trips, for both future residents and workers in Mission Bay. However, the only (existing or proposed) Mission Bay service stop provided by Caltrain is at its north terminus station, located on the north edge of Mission Bay, at Fourth and Townsend. Although this station site is accessible to much of Mission Bay, particularly Mission Bay North, much of the Mission Bay South area is a considerable distance from the Caltrain station. . .

Creating a secure, convenient Caltrain station at 16th/17th Street, would mean that Mission Bay South, particularly the proposed UCSF campus, would have greatly improved access to Caltrain services. It also has the potential to reduce the service requirements of the Mission Bay shuttle operation suggested as part of a possible TSM Plan. It is recognized that it is impractical to expect that all commute trains would stop at a 16th/17th Street station, but some peak period service to Mission Bay by Caltrain could offer an important new transit element.

- a. Is it feasible to close the 22nd Street Station and relocate it to a site in the vicinity of 16th/17th Street?
- b. Has this proposal been examined previously by the Peninsula Commute Joint Powers Board or Caltrans? If so, what conclusions were reached?
- c. What increment of additional ridership would be forecast on Caltrain if a Caltrain station were provided at 16th/17th Street? What proportion of this additional ridership would be generated by Mission Bay?
- d. Do the Caltrain travel forecasts used in the DEIR include Mission Bay / San Francisco International Airport trips, given the absence of any direct connection (assumed in the analysis) between Caltrain and the Airport?
- e. Adjacency of a Caltrain station to the UCSF campus would presumably lead to the increased use of Caltrain for trips between the campus and the Airport, as well as for trips between the campus and Stanford Hospital in Palo Alto (now affiliated with UCSF)? Is it possible to forecast the increments of increased (Mission Bay) Caltrain use for both Peninsula destinations? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)



***Response***

Comments note that Caltrain ridership is most recently estimated at more than 28,000 per weekday and continues to increase rapidly. Comments inquire about the SEIR's consideration of increased Caltrain service frequency that was part of the Caltrain Downtown Extension DEIR, and other rail services in the Caltrain corridor that would potentially affect the operation of intersections at-grade rail crossings. Comments also suggest that passenger loads cannot be distributed evenly between all Caltrain departures during the peak hour, that no additional trains greater than four cars in length should be used for calculating future capacity, and that therefore the assumption used in the DSEIR about planned increase in capacity is not correct. One comment requests consideration of a possible new Caltrain station at 16th Street to serve the project.

The SEIR indicates on p. V.E.7 that average Caltrain weekday ridership in Fiscal Year 1996/97 was 24,800 passengers per day, according to Caltrain's 20-Year Strategic Plan document. On p. V.E.84, the SEIR discusses the expected annual average growth rate for the 1997-2015 period assumed in the transit analysis. As indicated in the text, a 4% annual average growth rate was used, to be consistent with Caltrain's 20-Year Strategic Plan. This is a more conservative estimate than the 1.8% annual growth rate estimated by the MTC model or the 2.7% annual growth rate estimated by the Caltrain San Francisco Downtown Extension Project in that it produces a greater cumulative growth figure than the other potential services. It should be noted that the 4% rate is an average growth rate for an 18-year period, and logically would fluctuate from year to year. In some years a higher-than-average growth rate would most likely be accomplished, while in others Caltrain ridership would grow at a less-than-average rate. Most of the passenger growth recently experienced by Caltrain has been in the traditionally non-peak direction, that is, southbound in the morning and northbound in the afternoon, when more seating capacity is available.

On p. V.E.84, the SEIR discusses the assumption that Caltrain would increase the number of trains from 66 trains per day to 86 trains per day by the year 2015. The 86 trains per day assumption is consistent with both the Caltrain San Francisco Downtown Extension Project assumptions and Caltrain's 20-Year Strategic Plan assumptions. Actually, the 20-Year Strategic Plan indicates that the number of weekday trains in the year 2015 could be as high as 102. The SEIR Caltrain capacity analysis for the year 2015 assumes conservatively that the lower number of trains (86), and therefore fewer seats, would be available to Caltrain riders.

Pages V.E.17 and V.E.74 note that the evaluation of the operation of the intersections of Seventh and Sixteenth Streets, Seventh Street and The Common, and Seventh and Berry Streets considered the impact of Caltrain at-grade rail crossings. The influence of train operations was determined for both

the existing conditions, as well as under all future condition scenarios, under which trains would be more frequent, and therefore cause a greater impedance of vehicular traffic flow into and out of the Project Area. By using the number of trains that would be passing through these crossings during the p.m. peak hour (based on information from David Maxey of Caltrain staff, cited in endnote 79 on p. V.E.125) and the approximate amount of time during which the crossing gates would be down, the intersection signal timings were assumed to be modified to reflect the reduced capacity of traffic movement across the tracks into and out of the Project Area. The same methodology was used to evaluate the alternatives and variants to the project.

Caltrain already operates a mix of four and five 140-seat car trains during the peak commute period (p. V.E.7, and Table V.E.13 on p. V.E.85). Therefore, it has been assumed in the SEIR that a similar mix of trains would be in operation in the year 2015. Since Caltrain's 20-Year Strategic Plan indicates that up to 102 daily trains may be in operation in the year 2015, it seems reasonable to assume that with only 86 daily trains in service, some additional passenger cars would be available so that not all of the peak commute trains would have only four cars.

Although it is true that Caltrain operates a mixture of limited-express and all-stop services and the passenger riderships on these two services are different, it is also true that Caltrain schedulers strive to accommodate these different demands by establishing longer or shorter trains for the different types of commuter service. The passenger load analysis does not assume that passenger loads would be distributed evenly among trains, but rather that they would be distributed based on the number of seats available on each train.

Page V.E.53 indicates the reason why Caltrain's San Francisco downtown extension has not been assumed to occur before the year 2015, the two most important reasons being the high cost of the expansion project and lack of funding. The same can be said of other rail services in the Caltrain corridor included in the comment, such as High Speed Rail to San Francisco and rail service across the Dumbarton Bridge.

Construction of a new station platform in the vicinity of 16th and 17th Streets would face physical and operational constraints. The railroad tracks in this area are placed on a curve, in a tight location between the I-280 freeway supporting columns, and on an incline that drops to 50 feet below street level by the time it reaches Mariposa Street and enters into a tunnel. There are also approximately 9- to 12-foot clearances between the centerline of the tracks and the outside of the freeway columns.<sup>13/</sup> In addition, the close spacing between this station and the Caltrain terminal—less than one mile—would negatively affect train operations in terms of speed and braking.



The existing 22nd Street station could be used as a possible multi-modal connector where shuttle buses could bring Caltrain riders to and from Mission Bay. However, this station is serviced only by a small number of peak period trains, given its close proximity to the Caltrain terminal. Moreover, Caltrain's *20-Year Strategic Plan* indicates that "The Peninsula Corridor JPB will work with the City of San Francisco and MUNI to monitor the activity of (22nd St.) station after the MUNI Metro Third Street Light Rail Line is extended to Bayshore in 2003. The light rail line will run only blocks (about 1200 feet) away from the 22nd Street Caltrain Station."/14/ This statement indicates that the 22nd Street Caltrain station may be closed if ridership declines.

The Caltrain patronage growth forecasts used in the SEIR include an intermodal connection with BART airport service at the Millbrae station.

### Ferry Service

#### ***Comment***

The DEIR addressed Bay passenger ferry services (page VE.88) and found that the (forecast) fifty persons whose travel would be generated by Mission Bay could easily be accommodated by the service capacity of Golden Gate Transit's services at the Ferry Building terminal (page V.E.88). The DEIR also mentions (page VI.32) the prospect of "... special ferry service for fans to and from baseball games in China Basin." The Subcommittee has heard of reports that the San Francisco Giants are intending to construct a ferry terminal in conjunction with the new ballpark immediately east of Mission Bay at China Basin.

- a. Is it true that the Giants organization is implementing a ferry terminal in conjunction with the new ballpark?
- b. Would ferry service from this location to [the] Eastbay attract trips generated by Mission Bay, assuming a high level of accessibility (for example, the shuttle service suggested in the TSM Plan, page VI.30) between a ballpark ferry terminal and Mission Bay?
- c. What would the cumulative passenger use of an Eastbay ferry service at the ballpark be when trips generated by nearby, accessible areas are included in the forecasts? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

#### ***Response***

The Port of San Francisco and San Francisco Giants are considering implementing a ferry terminal at China Basin for ballpark event patrons. In Section VI.E Mitigation Measures: Transportation, on p. VI.32, the SEIR discusses the Port of San Francisco's plans to facilitate ferry service for ballpark fans to and from China Basin, and the ability of such a ferry terminal to serve Mission Bay. The feasibility of this ferry terminal has not yet been determined. As part of the Transportation System

Management Plan discussed in the Transportation Mitigation Section, the SEIR identifies assisting in assessing the feasibility of a ferry terminal at this location, and coordination between the Mission Bay North Transportation Management Association and the Ballpark Transportation Coordination Committee to facilitate service for individuals traveling to and from Mission Bay as well as for ballpark patrons. The Port of San Francisco would consider the possibility of providing a ferry terminal at the foot of 16th Street to serve Mission Bay residents and commuters if there was sufficient demand in the future./15/ The 16th Street area is more centrally located in Mission Bay South, than the area adjacent to the ballpark and is assumed to better serve a larger number of Mission Bay residents and commuters.

## **Parking**

### **Parking Standards and Deficit**

#### ***Comments***

In Vol. I, page V.E.96 "Parking Impacts," in the last paragraph, the SEIR authors have described the parking to be provided by the Mission Bay developer as a "requirement." Unfortunately, that is a false and misleading description of the developer's commitment, and should be corrected on that page and wherever else it appears in the SEIR. Parking for Mission Bay is, in fact, defined in terms of "maximums" allowable with no "minimum" requirement (see Table III.B.3 in Vol. I, page III.32). In fact, there is no "requirement" that the developer provide as much as one single parking space in the entire project.

While parking is discussed at length in various portions of the SEIR, it is also maintained by the SEIR authors that parking shortfalls are not, by CEQA definition (and in light of the City's "Transit First" policy), environmental impacts. This argument, while it may have appeal to certain urban planning theorists, fails to hold water when the reality of San Francisco automobile ownership and transit riding practices are taken into account. In real terms, the failure of any developer to provide minimum parking to service residential, and more importantly, retail and commercial developments produces clearly definable environmental effects. As anyone knows who has lived in a San Francisco neighborhood where a movie theatre or other commercial development is situated but where no parking is provided, the inevitable effect is to force residents and patrons of the commercial and retail to endlessly circle the blocks near their destination looking for a parking place. This process leads to additional consumption of gasoline, concomitant additions to air pollution, and additional area traffic--all of which are surely CEQA impacts and quantifiable by analysis.

Further, even if the Mission Bay developer builds out the parking to the maximum allowable levels, the project produces a deficit for residential spaces of 1,830 spaces, and a deficit of 2,930 spaces for the commercial development. The total parking space deficit is 4,760 spaces, as noted in Vol. I, page V.E.96. This deficit will inevitably be made up by forcing Mission Bay residents and commercial tenants into parking out of the project's boundaries, and particularly in the South Beach, South of Market and Potrero Hill neighborhoods. The SEIR authors must provide an analysis of the effect on



increased traffic and air pollution in these nearby neighborhoods brought about by the project-generated parking deficit.

It should also be noted that the total deficit noted above—quite amazingly—does not take into account the additional parking deficit that will be created by Giants' games at Pacific Bell Park. The SEIR notes on page V.E.101 in the first paragraph that "On days when sold-out events were scheduled at the Giants Ballpark, parking in South of Market and Mission Bay areas would be in great demand." Unfortunately, the SEIR authors do not even attempt to quantify that demand, or the environmental effects of the overload on parking resources. . .

Finally, it is clearly not enough for the SEIR authors to examine the environmental effects of the minimum projected deficit of 4,760 parking spaces. Since the developer has no requirement to provide even one parking space, and has not agreed to make any commitment in that regard, it is incumbent on the SEIR authors to analyze the environmental effects of a parking deficit where no parking at all is built by Catellus in Mission Bay—that is, fully analyze the effects on traffic and air pollution where the parking deficit is the full 26,125 spaces generated by the project as noted in Vol. I, page V.E.96. (*Rick Mariano, Chairman, Rincon Point - South Beach Citizens Advisory Committee*)

I understand that current plans for the Mission Bay Project have maximum parking requirements not minimum. This seems unrealistic and potentially tragic.

The South Beach District was desolate until recently. Now Gridlock is a daily occurrence and parking is scarce. With the addition of the Stadium and other businesses the conditions will only worsen, unless we act now. (*Tim Donnelly*)

The SEIR projects an anticipated long-term parking deficit of 4,700 parking spaces based on a demand for 26,125 spaces and an anticipated supply of 21,371 spaces. This would suggest that more off-street parking spaces should be provided. (*John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants*)

With regards to traffic, I was not part of the transportation and traffic committee for the CAC, but I was given some of this information. And I believe that the Rincon Point CAC, Rincon Point-South Beach CAC forwarded a letter on to you identifying a parking deficit and no minimum standards set for Mission Bay housing development.

In San Francisco parking is not considered an environmental impact. . .

Given today's *Chronicle* evidence, Concord, City of Concord, approving a 30 cineplex. What happened there was all the small businesses were driven out of business because of no adequate parking.

So I would encourage this Joint Session of the Planning and Redevelopment Commission to at least set some minimum parking standards for Mission Bay. (*Jeffrey Leibovitz*)

*Response*

Comments express concern that because the parking requirements for the project are set in terms of maximum number of parking spaces, the actual parking deficit for the project may be higher than estimated in the Draft SEIR. Comments also request the evaluation of the parking deficit's impacts on the surrounding environment including nearby residential neighborhoods, and specifically on Giants game days.

The Design for Development documents have been revised since publication of the Draft SEIR to include a required minimum number of off-street parking spaces in the Mission Bay North Retail area of 75% of the maximum number permitted.

The parking deficit of 4,760 spaces would develop gradually over time as the Project Area was built out. The deficit would be distributed across the 303-acre Project Area resulting in an average parking deficit of about 16 spaces per acre. In comparison, a parking demand analysis conducted by Wilbur Smith Associates in 1992 for the expansion of the Fifth and Mission Garage in San Francisco's South-of-Market area estimated that the future parking deficit in the area bounded by Market Street to the north, Harrison Street to the south, New Montgomery and Hawthorne Streets to the east, and Sixth Street to the west (approximately 190 acres) would be about 3,600 spaces, approximately 19 spaces per acre.<sup>16</sup> As development has occurred in this and other areas of the northeast quadrant of the City, both visitors and workers have adjusted their modes and times of travel to minimize the effects of this theoretical deficit.

The calculated parking demand is based on the number of vehicles that would be driven to and from Mission Bay if the parking supply were not constrained. The parking supply would be constrained even if all parking permitted by the maximum standards were provided as part of the project. It is reasonable to expect that most developers of residential sites in Mission Bay would provide the maximum permitted one parking space per dwelling unit for market-rate housing, as has occurred in the Rincon Point/South Beach Redevelopment Area, but it is less clear how much parking would be provided for various commercial/industrial and retail uses. Ultimately with a constrained supply, it is likely that demand would be less.

The proposed limited parking supply is consistent with the City's "transit first" policy to make transit or carpooling more attractive as alternative modes of travel for many individuals who would have driven alone if the parking supply were not constrained. If parking were provided at less than the maximum permitted, the theoretical deficit would be greater, further constraining supply and exacerbating the effects described in the SEIR. Providing less parking than the maximum standards



called for in the Design Standards and Guidelines for Mission Bay, as noted on p. V.E.95, would further promote the City's "transit first" policy by continuing to discourage automobile commuting. The individuals who are most likely to seek alternative modes are those traveling to and from Mission Bay on a daily basis, such as employees who commute four or five days a week. These employees are more sensitive to the cost and availability of parking as has been shown in greater downtown San Francisco, where over 60% of commuters use transit or other means to travel to and from work./17/ Although the cost of parking in Mission Bay may not be as high as that of downtown San Francisco, the inclination to explore transportation alternatives would occur as an iterative process as the Mission Bay project develops and drivers become more aware of the parking conditions and the availability and frequency of transit. Therefore, the actual deficit may end up being less than the conservative SEIR calculation that is based on unconstrained demand.

The project includes several major transit improvements as part of the project, such as the extension of the 22-Fillmore and the 30-Stockton or the 30/45-Union/Stockton to and through the Project Area. In addition, the Third Street light rail project, planned to open in 2003, will include four stations within the Mission Bay Project Area. These transit facilities are expected to make transit use an attractive alternative to driving, particularly given the proximity to downtown and regional transit.

A parking deficit is not considered to be a significant environmental impact in San Francisco because General Plan and other City policies support prioritizing transit service and use to avoid the need for excessive use of scarce urban land for parking and other vehicle-serving purposes and to reduce environmental and other impacts associated with excessive private vehicle travel within the City. It would not be consistent with these policies for the City to consider deficits of parking supply calculated on the basis of unconstrained parking demand a significant impact. Economic effects of a parking deficit are not required to be analyzed in an EIR, pursuant to CEQA Section 21151 (b) and State CEQA Guidelines Section 15360. Examples of the economic effects of parking deficits in suburban communities such as that provided in one comment would not be directly comparable to San Francisco locations that have more frequent and more accessible transit service.

Residents of nearby neighborhoods may experience an increase in parking demand following full buildout of Mission Bay, as noted on p. V.E.100. If residents of these neighborhoods perceive a parking problem and wish to limit non-resident commuter parking, they could request that the City's residential parking permit program be expanded to include these neighborhoods, as indicated on p. V.E.100.

It is not feasible to estimate the amount of additional traffic that might be found in nearby areas due to drivers searching for parking spaces. The amount would vary from day to day and during various times of a day. Therefore, additional gasoline consumption and related air pollution cannot be estimated. To the extent that people might drive to the Project Area despite constrained parking and then drive additional blocks searching for parking, fuel use and localized emissions could increase somewhat. This increase would be balanced by drivers who discover that parking is difficult and shift to other modes of transportation, reducing the overall demand for parking. Thus, providing less parking could actually reduce future overall air pollution and fuel use compared to that which could result from providing more ample parking.

Quantification of a combined parking deficit from Mission Bay on a day when the ballpark would host a major ballgame or event would not be reliable because it is likely that as Mission Bay employees, residents and visitors gain experience with ballpark events, they would change their travel habits on days when special events were planned. Some would continue to drive to the Project Area and claim their usual parking spaces in the morning but arrange to leave earlier or later to avoid congestion before or after an event; others would choose to use transit or perhaps telecommute on event days. Thus, adding the calculated parking deficit for Mission Bay, which does not account for mode shifts as drivers expect temporary parking deficits, to the parking demand for the Giants ballpark, which also does not account for mode shifts, could unrealistically overestimate the overall demand. On p. VI.30 in Section VI.E, Mitigation Measures: Transportation, the SEIR includes a mitigation measure that calls for establishment of a Mission Bay Transportation Management Association (TMA) to implement the Transportation System Management Plan, as well as a Mission Bay Transportation Coordinating Committee (MBTCC) to address transportation planning and coordination in the Project Area and its vicinity (see "Transportation Systems Management," pp. XII.174-XII.177, for the modified Mitigation Measure E.46 with MBTCC included). The MBTCC would work closely with the San Francisco Giants (i.e. the Ballpark Transportation Coordinating Committee [BTCC]) "concerning issues related to parking and traffic that would affect both Mission Bay employees, visitors, and residents, as well as ballpark patrons." Such cooperation would insure that their plans for traffic circulation and parking are consistent. Catellus, UCSF and local neighborhoods currently have representatives on the BTCC. Decision-makers could consider whether to include neighborhood representation in the MBTCC to provide a vehicle for discussing issues such as potential neighborhood parking intrusion.

Providing more parking in Mission Bay North, as suggested in one comment, would attract additional automobile trips, and could add to traffic congestion in the Project Area and in the South of Market and Rincon Point/South Beach neighborhoods. The parking standards contain some limited ability to



increase parking for retail uses, at the Agency's discretion, based on a project-specific parking demand study. As noted earlier in this Response, the City's "transit first" policy discourages provision of large amounts of parking.

The SEIR text on p. III.32 has been revised to include this additional parking information, adding the following sentence before the last sentence on the page:

**For the Mission Bay North Retail area, the Design for Development documents would also include a minimum required number of parking spaces, established at 75% of the maximum.**

In the Parking Impacts discussion of Section V.E, Transportation, on p. V.E.96, the first sentence in the second full paragraph has been modified to read:

**The demand analysis indicates a need for approximately 7,920 residential parking spaces, while a maximum of 6,090 spaces would be ~~required~~ permitted, indicating a deficit of about 1,830 spaces.**

On p. V.E.96, the next-to-last sentence in the second full paragraph has been modified to read:

**This can be compared with a maximum ~~requirement~~ permitted number of about 15,280 spaces, to yield a deficit of ~~approximately at least~~ 2,930 spaces.**

The first sentence in the last paragraph on p. V.E.96 has been modified to read:

**Some of the differences between the overall demand and the proposed ~~requirement~~ maximum number of spaces to be provided are attributable to differences in parking rates used for some land uses; for example, the estimated demand per dwelling unit is about 1.3 parking spaces, while the ~~requirement calls for~~ maximum permitted would be 1 parking space per unit.**

#### Parking Standards/Provide Less Parking

##### *Comments*

And this SEIR describes a project which plans for too many cars. By having an off-street parking space for every unit built and lots of on-street parking, and if you don't follow through and constrain use in SF parking, you are going to have a neighborhood which has a lot more parking than a lot of really wonderful, lovely neighborhoods in San Francisco that were built before our relatively recent era of car dependence.

If you were to allow developers and encourage developers to build housing without parking, you could have a lot more affordable housing, a lot more people could afford it, and you could improve the efficiency of mass transit, you would have more people supporting the local businesses to do their commerce, including the job situation locally. That's my general concern. (*David Snyder, Executive Director, San Francisco Bicycle Coalition*)

The SEIR contains a mitigation section talking about constraining parking at the UCSF facilities. We feel that parking should be constrained in the residential areas as well. (*Jon Rainwater, San Francisco League of Conservation Voters*)

So I'd like that to be considered, and especially in the areas of density and in the areas of parking it could be consideration of actual reduction of parking, again, for increasing alternative plans for transportation. (*Commissioner Mark Dunlop, Redevelopment Agency Commission*)

We concur with the recommendations of this EIR, which call for a reduction in the 5,300 spaces proposed by UCSF in their project, which exceeds the amount recommended by the Planning Department. Another innovative way to decrease parking that should be considered . . . involves car-sharing. Up to 10 households share the expenses and uses of one vehicle. That would allow the space of 9 garages to be used for additional housing. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

#### **Response**

Comments indicate a preference to reduce the maximum number of parking spaces allowed to be built as part of the Mission Bay Project, in order to encourage the use of alternative modes of transportation and assist in providing affordable housing.

The maximum parking supply calculations are based on the proposed Design Standards and Guidelines, which reflect the City's "transit first" policy. The parking supply that is proposed for Mission Bay is less than the estimated parking demand, and would therefore encourage alternative modes of transportation to and from the Mission Bay Project Area. However, the proposed supply of parking is also intended to provide a reasonable level of parking, to serve the demand and not make parking so difficult that those individuals that do need to drive are discouraged from traveling to Mission Bay. Thus, the proposed supply of parking in Mission Bay is intended to strike a balance between promoting alternative modes of transportation without threatening the vitality of the area.

As indicated on p. VI.31, constraining the parking supply within the UCSF site is identified in Measure E.48 as a potential parking management measure. The parking supply rates could be reduced to reflect the approximate parking supply ratio provided in the rest of the Project Area, which would result in approximately 3,200 parking spaces, instead of the 5,300 spaces proposed in the UCSF Long Range Development Plan (UCSF LRDP). The 5,300 spaces in the UCSF LRDP are based on a planning ratio of approximately 2 spaces per 1,000 gross square feet, as noted on



p. V.E.98. On the other hand, the parking demand estimated for the UCSF site (4,200 spaces) has been derived from parking demand analyses, based on experience at other existing UCSF sites, that already take into consideration the presence of good transit access to and from the site, and provision of shuttle service, carpool incentives, and substantial bicycle and pedestrian mode shares. Therefore, a reduction in the number of parking spaces below 4,200 may not realistically cause a substantial decrease in UCSF-bound automobile trips.

Although car-sharing concepts are often suggested, examples of successful car-sharing programs are not known to the EIR authors. The Transportation Management Association noted in Mitigation Measure E.46 (p. VI.29) could explore this idea along with other elements of a Transportation System Management Plan (see Mitigation Measure E-47, p. VI.30).

The parking standards for housing contained in the proposed Design Standards and Guidelines are maximums, which would allow flexibility to provide fewer than one space per unit to increase affordability or for other reasons. For a further discussion of affordable housing, see the responses under “Proposed Mission Bay Affordable Housing Program” in Business Activity, Employment, Housing, and Population, pp. XII.57-XII.65.

#### Provide Intercept Parking

##### ***Comment***

There are several parcels between the Caltrain Station, China Basin Building and Townsend Street where a large Parking Garage could be built. With easy access to the Bay Bridge and Southern freeways it could keep vehicles from clogging our streets and polluting our environment. A Garage Facility in this location would provide easy access to the new Stadium, entertainment and shopping establishments, as well as accommodating many of the cars destined for Downtown thereby alleviating much of the vehicular saturation in that area. (*Tim Donnelly*)

##### ***Response***

The comment suggests providing an intercept parking garage building at one of the two development blocks to the east of the Caltrain terminal.

A garage would not mitigate any identified significant impacts. The proximity of Mission Bay North to the downtown area suggests that an intercept-parking garage in this area would not be effective in encouraging regional transit usage because it allows individuals to drive into the City before boarding transit. In addition, the rising land values in the area suggest that parking facility operations would need to be subsidized in order to provide parking that would cost sufficiently less than the cost of parking closer to the downtown area to be attractive to downtown employees. The Mission Bay

Redevelopment Plan calls for up to approximately 5,500 parking spaces to be constructed in Mission Bay North, about 40 percent of them in the two blocks described by the comment. These spaces would most likely be at capacity on week days from the retail/entertainment and residential uses planned for these two blocks. This parking is also likely to be used by some individuals attending ballpark events because they would already be in the area for work or other entertainment activities. Some parking in this area of Mission Bay North would probably be available on weekends for ballpark attendees, but during weekend afternoons and evenings the demand for ballpark parking would coincide with the parking demand created by the entertainment-oriented retail uses in Mission Bay North.

#### Parking Improvements

##### *Comment*

Providing more parking and thus encouraging more automobile ownership and use in Mission Bay, as in practically any San Francisco neighborhood, is not a course which is either consistent with City policy or, in the long-term, a solution to the problem. It is evident that the parking consequences of the Mission Bay development give great priority to the following considerations, most of which are addressed in the DEIR:

- a. The identified investments in transit improvements are critical, and must be treated with the same degree of certainty as the traffic improvements which are associated with the phased development of Mission Bay and the use of the "adjacency principle". The investments in transit facilities and service expansions cannot lag behind Mission Bay's growth.
- b. The establishment of a Transportation Management Association (or "Committee", as previously recommended in these comments) and its aggressive development and implementation of a TSM Plan, is very important. The Transportation Management Committee must have the support and commitment of City departments and their resources, and must explore all of the programs and ideas which might be employed to address the forecast parking problems.
- c. The Transportation Management Committee established for Mission Bay should work closely with the Ballpark Transportation Coordinating Committee (BTCC) to insure that the plans defined for parking and circulation associated with the ballpark are integrated with the similar plans for Mission Bay, as development proceeds. As the discussion of the new ballpark in the Mission Bay DEIR (page V.E.107) indicates, assumptions employed in the ballpark environmental analyses are being altered by the Mission Bay planning.
- d. The Potrero Hill neighborhood should be monitored, as Mission Bay South is developed, to understand the degree to which parking impacts are felt, and problems created for residents and businesses. As evidenced by the substantial reservoirs of surface parking which currently exist in the vicinity of Folsom Street, and which serve the Financial District, drivers will walk a considerable distance if moderately priced parking is available. (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)



***Response***

The comment suggests that the Transportation Management Association aggressively pursue programs and ideas which might be employed to address the parking deficit, insure that parking and circulation plans proposed for Mission Bay are consistent with those established by the Ballpark Transportation Coordinating Committee, and monitor the Potrero Hill neighborhood to assess the impacts created by the parking deficit.

The transit improvements and projects described in the Mission Bay SEIR are realistic in terms of feasibility and funding. MUNI plans to open the Third Street Light Rail Transit service in 2003. Similarly, although specific funding has not been identified for the 22-Fillmore and 30-Stockton or 30/45-Union/Stockton trolleybus extensions into the Project Area, they are included in MUNI's Short Range Transit Plan and Capital Improvement Program. Applications are being made to MTC by the San Francisco Transportation Authority to find replacement trolley buses and to expand the trolley bus fleet in part to meet Mission Bay demand. In addition, Catellus would be responsible for installing trolleybus wire support poles and/or eyebolts on buildings along the new routes.

On p. VI.30 (as modified in the response under "Transportation Systems Management," pp. XII.174-XII.177, below), the SEIR explains that the Mission Bay Transportation Coordinating Committee would work closely with the San Francisco Giants (i.e. the Ballpark Transportation Coordinating Committee [BTCC]) "concerning issues related to parking and traffic that would affect both Mission Bay employees, visitors, and residents, as well as ballpark patrons." Such cooperation would improve coordination regarding plans for traffic circulation and parking. The changes in transportation assumptions described on p. V.E.111 of the SEIR, to which the comment refers, are due to the more detailed information available about the definition of the Third Street Light Rail project. MUNI's current preferred light rail transit alignment in the vicinity of the project calls for two-way light rail vehicle operation on Fourth Street/18/, rather than on Third Street, as assumed in the San Francisco Giants Ballpark EIR. Therefore, the traffic improvement measures proposed in that document such as street closures and pedestrian paths were adjusted accordingly by the BTCC. These adjustments have been described and assumed in the Mission Bay SEIR.

The objective of the elements of the proposed Transportation System Management (TSM) Plan discussed on pp. VI.30-VI.32 in the SEIR is to reduce the number of single-occupant vehicle trips to and from Mission Bay. Such a reduction in vehicle trips would also indirectly benefit the parking demand-supply ratio in the neighborhoods near Mission Bay. However, despite the measures outlined in the TSM Plan, residents of nearby neighborhoods may experience an increase in parking demand upon the development of Mission Bay, as noted on p. V.E.100 in the SEIR. Such an increase would

not be considered a significant impact and therefore is not included in the TSM measure. If, however residents of these neighborhoods perceive a parking problem and wish to limit the neighborhood parking supply for non-residents, then the City's residential parking permit program could be expanded to include these neighborhoods, as indicated on p. V.E.100.

## Bicycles

### Bicycle Safety

#### *Comments*

Specifically I'm concerned about the safety of bicycles on the street. You would think that in a brand new development, brand new streets, they'd make sure that those streets were safe for people to ride on bicycles. When we first looked at the plan, in too many cases they were not. It was appalling.

To the credit of the planners, however, we have worked with them, and in most every case have gotten an agreement to change the street cross-section so that people can at least ride on the street safely. . .

I strongly urge you to insist on streets that are safe for bicycles before you approve this plan.

Fourth Street just north of the channel has -- Fourth Street is considered the main bicycle thoroughfare, and it would be impossible to ride through there safely on a bicycle unless you are willing to put your bike in front of speeding cars. (*David Snyder, Executive Director, San Francisco Bicycle Coalition*)

. . . Four foot wide striped bike lanes along Terry Francois Way are inadequate and dangerous because of the speed of auto/truck traffic which will occur on that street. Catellus should provide four more feet of designated space along Terry Francois for wider, safe bike lanes. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

Page V.E.45: Bicycle Circulation. A significant number of the bicycle routes proposed involve hazardous oblique crossings of railroad tracks by bicyclists, or oblique crossings of rails made by cyclists at traffic intersections. Such crossings are always dangerous because bicycle wheels can become trapped in the rail flange way, but in wet weather the steel rails themselves are so slick that maintaining control of a bicycle may be impossible for even the most experienced cyclist, let alone the more casual riders who might be expected to be associated with the UCSF development. Significant attention should be paid to minimizing such crossings and to consideration of cyclist safety in such intersections, which in the present project include:

- King and Third and/or King and Fourth Streets. (Connections between the Mission Bay-serving MUNI Third Street rail extension and the Mission Bay-serving MUNI Metro Extension.)
- Fourth and Owens Streets. (Third Street Rail)
- Third and Mariposa (Third Street Rail)
- Sixteenth and Seventh (Caltrain)



- Sixteenth near Owens (Proposed relocated freight line connection to Caltrain ROW)
- Sixteenth and Third (where Third Street Rail crosses freight tracks)
- Sixteenth and Terry A. François Boulevard (Freight line)
- Terry A. François and Illinois Street (Freight line)

The proposed design of Sixteenth Street, incorporating both hazardous longitudinal rails (a hazard for cyclists making left turns from central lanes of the street) and of the proposed connection from this track to the Caltrain Right Of Way north of the Sixteenth Street grade crossing (involving those tracks curving across the westbound traffic lanes, just before an oblique, multi-track grade crossing at a congested intersection) is particularly troublesome. Consideration should be given both to grade separation of the Sixteen Street Caltrain crossing and to safer alternate rail freight access routes which present fewer hazards to cyclists. The proposed Sixteenth Street bicycle route is unnecessarily dangerous.

Page V.E.48: Freight Rail Operation Changes: Central location of the tracks does not effectively “separate” them from bicycle lanes because bicyclists, like motorists, must make left-hand turns. And as mentioned above, effecting a connection with the mainline tracks “immediately north of Sixteenth Street” will create a bicycle safety hazard as the tracks cross from the center to the north side of Sixteenth Street. (*Richard Mlynarik*)

Fourth Street between King and Berry Street is proposed to have 11’ traffic lanes with no bicycle lanes, creating a very serious hazard. Fourth Street is the designated north-south bicycle commute route, and the only direct route that safely connects Mission Bay and points south with South of Market and points north. The use of Fourth Street in lieu of Third Street, which is the designated route according to the San Francisco Bicycle Plan, is acceptable mitigation of the effect of the proposed Third Street Light Rail project. Bicycle lanes should be added to this segment of street. (*David Snyder, Executive Director, San Francisco Bicycle Coalition*)

### ***Response***

The comments express concern about the width that is available for bicycles within roadway cross-sections, particularly on Fourth Street between Berry and King Streets and on Owens Street, south of The Common roundabout; and on Seventh Street. The width of proposed bicycle lanes on Terry A. François Boulevard is also questioned. Safety issues related to bicycles traversing railroad tracks are identified, including the possibility of bicycle wheels falling in the rail flange way, and wet rail surfaces becoming slippery. These issues are addressed below in the same order that they were presented.

South of the Peter Maloney Bridge, the bicycle route proposed for Fourth Street as part of the Mission Bay project would consist of 17-foot-wide curb lanes adjacent to 8-foot parking lanes (during peak commute periods, no parking would be allowed on the peak-direction side, allowing for a 10-foot center travel lane and a 15-foot-wide curb lane). The 17-foot or 15-foot curb lanes would be shared by automobiles and bicycles. This configuration of Fourth Street is illustrated in Figure D.4 on page D.12. This is considerably wider than the typical 10-foot-wide automobile travel lane. On

the Peter Maloney Bridge the constrained width of the deck would require that bicycles share 13.5-foot-wide travel lanes with automobiles and light rail vehicles once the Third Street Light Rail project is constructed.

According to the recently adopted San Francisco Bicycle Plan, the section of Fourth Street north of the Peter A. Maloney Bridge, between the China Basin Channel and Townsend Street, is designated as a Class III (signs but no bike lanes) bicycle route. Given that it would be difficult to provide Class II bike lanes on Fourth Street north of King Street because of the location of the Caltrain station on the west side of Fourth Street, the Mission Bay project proposes to maintain the section of Fourth Street between the Channel and King Street as a Class III bicycle route as called for in the Bicycle Plan. The project description presented in the SEIR called for two 11-foot lanes in each direction and no parking. Catellus has since reviewed the project and proposes to provide an additional 8 feet of right-of-way on Fourth Street, between Berry and King Streets, so that the curb lanes on both sides of the street become 15 feet wide for this block./19/ These wider-than-typical lanes would be shared by automobiles and bicycles as a Class III bicycle route.

Four-foot-wide striped bicycle lanes along Terry A. François Boulevard are not proposed. The project proposes that six-foot-wide bike lanes be implemented along Terry A. François Boulevard, as shown on Figure D.5 (p. D.13), and as described on p. V.E.46 in the SEIR. These would apply to the project, as well as all the alternatives and variants, including the Terry A. François Boulevard variant as shown on Figure D.7 (p. D.15). Most bike lanes in San Francisco are five to six feet wide.

On pp. V.E.106-V.E.107, the SEIR acknowledges the potentially unsafe conditions that are associated with bicycles crossing tracks at an oblique angle. In Appendix D, Transportation, on p. D.19, the SEIR notes that in order to reduce hazardous conditions, rubberized surfaces would be installed at the Caltrain rail crossings of 16th Street, near the intersection of Seventh and 16th Streets. The rubberized grade crossing surfaces provide a very smooth transition between the street pavement and the railroad tracks, minimizing the exposure of the flange areas that are a hazard to bicyclists and improving traction in the area around the rails.

The danger associated with slippery tracks can be reduced by the provision of rubberized grade crossing surfaces at rail crossings, but the hazards related to bicycle wheels falling in the rail flange way can only be mitigated by minimizing the number of locations where bicycles must traverse railroad tracks. The hazard is greatest where the path of the bicycle crosses the tracks at a pronounced oblique angle (more than 20 degrees from perpendicular), such as at the intersection of



16th and Seventh Streets. When this condition occurs, the cyclist must zigzag noticeably to cross the tracks. In order for the cyclist to handle such crossings in a safe manner, the bicycle lane would have to be widened or realigned to provide a crossing angle closer to 90 degrees. The project sponsor intends to propose advance warning signs indicating the oblique angle crossing to be placed in advance of the railroad crossing, for review by the City's Interdepartment Staff Committee on Traffic and Transit (ISCTT) and the Department of Parking and Traffic (DPT).

The text in the bicycle impact section of the SEIR on p. V.E.107 before the last sentence in the first partial paragraph has been revised to add the following sentence:

**Catellus intends to propose placement of advance warning signs for bicyclists indicating the presence of rail crossings in advance of oblique rail crossings./95a/**

The following new endnote has been added as Endnote 95a on p. V.E.126:

**95a. Eric Harrison, Project Manager, Catellus Development Corporation, telephone conversation with Wilbur Smith Associates, August 4, 1998.**

Because the existing Caltrain and freight railroad tracks currently bound the Mission Bay area, and the Third Street light rail would travel through the area, the number of locations where bicycle routes conflict with railroad tracks cannot be completely eliminated. The proposed Mission Bay bicycle route network was designed to effectively serve the Project Area, while minimizing potential conflict with automobile traffic, light rail service, and railroad tracks.

The SEIR indicates on p. V.E.45 that “. . .to improve bicycle safety, rubberized surfaces are proposed to be installed as part of the project improvements at all existing and new rail crossings in the project Area, . . . ,” and a similar statement is made on pp. D.8, D.18 and D.19, in Appendix D, when describing the Berry, Common, and 16th Streets crossings of the Caltrain tracks.

At all those streets that intersect with the Third Street Light Rail Project alignment, such as King, Fourth, Owens, 16th and Mariposa Streets, the light rail trackage would be flush with the pavement, similar to the track configuration already used by light rail vehicles and streetcars in other parts of the City, such as Market Street or The Embarcadero. A similar track configuration would be used for the freight rail spur on 16th Street and Terry A. François Boulevard.

See the response under "Transit Measures" on pp. XII.172-XII.174, for a discussion of grade separation of 16th Street at the Caltrain crossing. See the response under "Bicycle Access," pp. XII.142-XII.143, for a discussion of Owens Street South of The Common.

As the project moves forward, bicycle advocates should continue to be consulted as part of the Mission Bay Transportation Coordination Committee activities, to ensure that plans address potential hazards to Mission Bay bicyclists.

### Bicycle Access

#### *Comments*

The proposed bicycle circulation plan (Figure V.E.9) designates bikeways on Owens, and North and South Common Streets, all accessing the traffic circle to the west and connecting to a bikeway on Fourth to the east. However, from the traffic circle, bike traffic is routed out of Mission Bay westward onto Seventh Street for bike movements southward. Consequently, no bikeway access is defined for Owens Street between the traffic circle and 16th. This appears odd in light of the fact that Owens will provide continuous access to the UCSF campus. What is the explanation for this element of the bikeway route planning? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

The project will result in a significant impact on bicycle safety on most streets in the project area, as both volumes and speed of car traffic increase. The proposed configuration of most of the streets in the project area does mitigate the safety impact of additional traffic through a variety of measures, including the installation of bike lanes, wide curb lanes, and bicycle paths.

However, several exceptions exist. The streets listed below will present unacceptably dangerous hazards to bicyclists unless changes are made. While making certain existing streets safe for bicycle traffic is difficult because the right-of-way and existing uses are established, there is no excuse in new developments to design streets that are dangerous for bicycle travel. . .

Owens Street south of the roundabout is proposed to have 4-11' traffic lanes with no bike lanes. This presents a very serious hazard and a strong deterrent to bicycle use in the project area. Bike lanes added to this street, or a parallel path with few side street intersections should be constructed.

Seventh Street, though outside of the project area, is likely to experience higher levels of traffic thanks to the project development. It, too, should have bike lanes added. (*David Snyder, Executive Director, San Francisco Bicycle Coalition*)

#### *Response*

Comments question the reason for Owens Street not being designated as a bicycle route south of The Common Street roundabout, and raise concerns about Fourth Street. Comments also suggest Class II (striped) bike lanes for Seventh Street.



The Mission Bay bicycle network is comprised of three primary east-west routes along Owens Street, 16th Street, and The Common that connect Mission Bay South with the citywide bicycle routes west of the Project Area, and two primary north-south bicycle routes along Terry A. François Boulevard and Fourth Street that connect Mission Bay South with citywide routes south of the Project Area. Owens Street is not proposed to have 4 ½-foot bicycle lanes.

Bicyclists traveling to or through the Project Area in the north-south direction would travel on either Seventh or Fourth Streets, and would most likely continue on these routes to their destinations. For bicyclists traveling from Mission Bay, Fourth Street is the most centralized direct route out of the Project Area and provides a continuous access through the UCSF site. Owens Street is constrained by the Channel to the north of Mission Bay South, and by the I-280 freeway ramps to the south of Mission Bay South. Thus, Fourth Street was chosen as a primary north-south bicycle route that both provides internal circulation, and provides a direct connection to the Citywide bicycle network outside of the project boundaries. Furthermore, Fourth Street would serve the core of the UCSF site, while Owens Street would serve only the less densely developed western edge of the Mission Bay Project Area. UCSF is expected to be a major generator of bicycle travel.

Mitigation Measure E.42 on p. VI.20 includes removal of on-street parking on Seventh Street between Townsend and 16th Streets during the peak commute periods. If this measure were included in the project by Catellus or by decision makers, during peak periods, the 11-foot curb lane would act as a mixed flow lane, accommodating both bicycles and automobiles, but would not be wide enough to provide striped bike lanes at intersections, due to the width required by left-turn pockets proposed on Seventh Street at the intersections. Between intersections, where left-turn pockets would not be provided, 14-foot-wide curb lanes could accommodate bicyclists, but because Class II lanes could not be provided at intersections, the width would not be striped for the portion of the street between intersections either. If Seventh Street were to be widened by approximately 10 - 12 feet near intersections, the street could be re-striped to include bike lanes during both peak commute and non-peak periods. This widening would require acquisition of private property on the west side of Seventh Street, because the street right-of-way is constrained by the Caltrain tracks on its east side. Because providing a Class II striped bicycle lane on Seventh Street is not necessary to mitigate any significant environmental impact, it is not proposed in the project and is not a mitigation measure in the SEIR.

Bicycle safety issues are discussed above under "Bicycle Safety" on pp. XII.138-XII.142.

## Bicycle Parking

### *Comments*

The proposed ratio of secure bicycle parking spaces to car parking spaces is too low. It should be adjusted to require 1 secure Class I bike parking space for every 10 off-street car parking spaces. (David Snyder, Executive Director, San Francisco Bicycle Coalition)

The Transportation System Management Plan set forth (pages VI.30-31) "Secure Bicycle Parking" as a possible element. Given the topography of Mission Bay, in contrast to many other parts of San Francisco, biking should be strongly encouraged as a mode of transportation. Is it possible, and what planning and zoning steps would be necessary, for buildings constructed in Mission Bay to have secure bicycle parking required, via the building permit, as an integral part of the building? (Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee)

### *Response*

Comments suggest that the requirement for secure bicycle parking spaces be increased to one bicycle space per 10 off-street parking spaces, and that bicycle parking be required as part of the building permit acquisition process.

On p. V.E.107, the Draft SEIR discussed the Redevelopment Plan design documents' proposed requirement of one bicycle parking space for every 30 off-street automobile parking spaces for residential, retail, commercial industrial, and commercial industrial/retail land uses. Since the Draft SEIR was published, the project sponsor has agreed to supply bicycle parking at a ratio of 1 space per 20 off-street automobile parking spaces, based on the maximum number of parking spaces allowed for the project (21,371). Using this formula the *minimum* number of bicycle parking spaces would be  $21,371/20$ , or 1,069. This commitment will be reflected in the Redevelopment Plan documents. The first sentence in the first full paragraph of p. V.E.107 has been revised to show this change as follows:

**The Redevelopment Plan design documents call for bicycle parking ~~is proposed to be provided~~ at a ratio of one bicycle parking space for every ~~20~~ 30 off-street automobile parking spaces for residential, retail, commercial industrial, and commercial industrial/retail land uses. The maximum number of parking spaces allowed for the project (21,371) would be used to calculate the minimum bicycle parking supply, resulting in about 1,070 bicycle parking spaces.**

Page V.E.105 states that approximately 1,850 trips to and from the Mission Bay Project Area would be made by bicycle during the p.m. peak hour. The tables below indicate the number of p.m. peak hour bicycle trips and the peak bicycle parking supply and demand for both residential and non-residential uses in Mission Bay.



| Table XII.3<br>PM Peak Hour Bicycle Trips:<br>Year 2015 Cumulative Conditions with Project |             |                 |       |
|--|-------------|-----------------|-------|
|  | Residential | Non-Residential | Total |
| In   | 570         | 290             | 860   |
| Out  | 280         | 710             | 990   |
| Total  | 850         | 1,000           | 1,850 |

Table XII.4 indicates that the peak bicycle demand for residential uses would be about 570 spaces, while the peak bicycle parking demand for non-residential uses would be approximately 1,730 spaces. This shows a deficit of 260 bicycle spaces in the Mission Bay residences and a deficit of 970 bicycle spaces for the non-residential uses.

| Table XII.4<br>Peak Bicycle Parking Supply and Demand:<br>Year 2015 Cumulative Conditions with Project |             |                 |
|--|-------------|-----------------|
|  | Residential | Non-residential |
| Demand   | 570         | 1,730           |
| Supply   | 310         | 760             |
| Deficit  | 260         | 970             |

The residential deficit would be reduced or eliminated if some residents parked their bicycles either in their garages next to their automobiles or inside their units. The 970 bicycle parking space deficit for non-residential uses means that more than half of the projected bicycle-riding employees and visitors in Mission Bay would have to seek a secure parking space for their bicycles on the sidewalks. Although it is likely that some cyclists would choose to park their bicycles inside office buildings, and others would find satisfactory bicycle parking in on-sidewalk racks, a deficit would still remain.

The following new paragraph has been added following the first full paragraph on p. V.E.107, to include a discussion of bicycle parking deficit:

**The bicycle parking demand would be for about 2,300 spaces, resulting in a deficit of about 1,230 spaces throughout the Project Area. Some of the deficit could be met by residents parking their bicycles either in garages next to their automobiles or in their**

**residences. Short-term demand could be satisfied by bicycle racks on sidewalks, particularly in neighborhood shopping areas and on the UCSF site.**

If bicycle parking were to be provided at a ratio of one space per ten off-street automobile parking spaces, as suggested in the comment, there would be a deficit of approximately 204 bicycle parking spaces for non-residential uses, and a surplus of approximately 41 spaces for residential uses. Some of the non-residential demand, particularly that from visitors or shoppers, would be satisfied by outdoor racks on sidewalks or in courtyards.

The bicycle parking demand estimated in this analysis uses standard bicycle trip generation and arrival rates, which are based on limited available information to date. Therefore, it is possible that all of the demand shown in Table XII.4 may not materialize. In order to ensure that the needs of bicyclists in Mission Bay are met, the Transportation Management Association could monitor the demand for bicycle parking spaces as the project progresses. Measure E.47e of the Transportation System Management Plan described on p. VI.30 includes a general statement about the provision of secure bicycle parking. Measure E.47e has been revised to read:

**E.47e Secure Bicycle Parking. Applies to Mission Bay North and Mission Bay South.**

**Provide secure bicycle parking areas in parking garages of residential buildings, office buildings, and research and development facilities. Provide secure bicycle parking areas by 1) constructing secure bicycle parking at a ratio of 1 bicycle parking space for each 20 automobile parking spaces, and 2) carrying out an annual survey program during project development to establish trends in bicycle use and to estimate actual demand for secure bicycle parking and for sidewalk bicycle racks, increasing the number of secure bicycle parking spaces or racks either in new buildings or in existing automobile parking facilities to meet the estimated demand.**

**Provide secure bicycle racks throughout Mission Bay for the use of visitors.**

To make bicycle parking in the Mission Bay Project Area part of the San Francisco Building Code would require the San Francisco Board of Supervisors to adopt an amendment to that Code. A requirement for bicycle parking included either in the Redevelopment Plan or the Owner Participation Agreements would be enforceable by the Redevelopment Agency whether or not amendments were offered and adopted in the Building Code.



## **Pedestrians**

### Fifth Street Pedestrian Bridge

#### ***Comments***

As a member of the Mission Creek Harbor Association, I have a few comments to make about the SEIR and some points that are particularly overlooked.

And that is, there's no mention in the SEIR of any impact on the people who own houseboats and boats in the Mission Creek Harbor, particularly in respect to the idea of having a Bridge cross at Fifth Street which will not allow us to bring our boats out of the harbor. (*Torbin Torpe-Smith, Mission Bay Harbor Association*)

The prospects for the pedestrian Bridge discussed for connecting the north sides of China Basin Channel at an approximate Fifth Street location needs to be clarified. Redevelopment Agency staff have indicated to the Committee that this Bridge should be "assumed as part of the project," implying that its completion in conjunction with the phasing of development is assured. However, the DEIR makes no such claim or intimation.

Pages V.E.101/102 of the DEIR describe the pedestrian Bridge as something that is "proposed", rather than as an element which is "assumed" as part of the project. The DEIR points out that the Bridge would improve general pedestrian circulation, but would specifically assist pedestrian access between the Caltrain station and King Muni LRT stations, and Mission Bay South. The DEIR points out that if pedestrians are required to travel eastward to the Fourth Street Bridge, the additional travel time and discomfort (narrow paths on the Bridge) might discourage their use of transit.

- a. If the pedestrian Bridge is important in serving pedestrian movements to and from fixed rail transit stations, why is it not one of the assumed elements of the project, in the same way that traffic measures are assumed?
- b. Were forecasts accomplished on the level of use of the pedestrian Bridge, either for general pedestrian movements or for movements specifically related to use of the rail transit facilities?
- c. Would provision of the pedestrian Bridge diminish the need and/or reduce the operating requirements of the proposed shuttle bus service discussed in the suggested TSM Plan? Would the capital and operating costs of the pedestrian Bridge be less over the long-term than the costs of shuttle service?
- d. If the pedestrian Bridge should be "assumed" (as staff have indicated), has responsibility for funding and constructing the Bridge been identified or assigned?

With respect to the proposed pedestrian Bridge over the China Basin Channel at the hypothetical extension of Fifth Street, the DEIR provides a description of this proposed Bridge (pages V.E.46-48). The DEIR suggests that this new pedestrian Bridge would be a "swing" Bridge, which would accommodate the continued maritime use of the Channel, and further points out that the Bridge would

be operated " . . . by the Department of Public Works at existing facilities that control the two automobile bridges over the Channel" (page V.E.46).

At the present time, the Lefty O'Doul and Peter Maloney Bridges are operated by a single bridgetender, who must move from one Bridge to the other in order to open and close each of the bridges. They are not operated from a single control point, which raises a question about the comment in the DEIR regarding the operation of the proposed pedestrian Bridge. What is the thinking behind the above-cited comment in the DEIR? Is it proposed that the pedestrian Bridge be operated remotely from the Fourth Street Bridge? How would this work, given the need for the bridgetender to sometimes be at the Third Street Bridge? Would a remote control be provided at both bridges? Are there safety issues inherent in such a remote control operating method?

The proposed pedestrian Bridge over China Basin Channel at the hypothetical extension of Fifth Street (pages V.E.46-48) is proposed as a "swing" Bridge because of the need to maintain a navigable channel, and the implications of grade change which would be required by non-movable Bridge. An alternative to a Bridge which should be given consideration is a cable-stayed pedestrian ferry.

The use of a cable-stayed ferry to provide for pedestrian movements across the Channel would mean potential savings in terms of both capital and operating costs. Propelled by a cable drive attached to the bottom of the ferry's hull, the cable would be installed on the floor of the Channel, thus providing a navigable waterway which would be virtually barrier free. Is this an alternative to a swing Bridge which should be considered? Is information available regarding this technology and the feasibility of its application to the China Basin Channel pedestrian crossing need? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

**PEDESTRIAN BRIDGE** While the swing pedestrian Bridge is "proposed" in the DSEIR (III.30) to improve pedestrian circulation (V.E.46) and "may be included in the project" (V.M.23), nowhere in the DSEIR is it shown to be a definite part of the project, nor is there any time frame or funding shown for its development. If timing and funding for a pedestrian Bridge cannot be adequately determined at this time, the SEIR should incorporate alternative mitigation measures to improve access to open space and pedestrian circulation. We would specifically request consideration and review of an automated "cable ferry" for pedestrian crossing at 5th Street. A conceptual drawing is attached for your review.<sup>1</sup> This could probably be built much more quickly and at far less cost than a swing pedestrian Bridge.

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<sup>1</sup> Further information and a large scale drawing may be obtained from Kevin O'Connell, 300 Channel Street, Box 14, S.F. 94107 Phone: (415) 861-3420

(*Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee*)

**Pedestrian Bridge.** The DSEIR confirms that a pedestrian Bridge at the 5th Street alignment must permit navigation of boats, and will probably have to be designed as a swing Bridge. Since this is a potential expensive proposition, and control of the swing Bridge is also quite complicated, we suggest that the SEIR consider a cable-ferry alternative, which would not interfere with boat navigation, and which would probably be less expensive to build. A Site Plan is attached for reference. Further



details may be obtained from Kevin O'Connell, 300 Channel Street, Box 14, SF 94107 (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

### ***Response***

Comments question why the pedestrian bridge has not been assumed as a part of the project, whether forecasts for pedestrian volumes on the bridge were determined, whether providing the bridge would reduce the operating requirements of the proposed shuttle bus, whether funding sources have been identified, and request clarification on the remote operation of the bridge. Comments also express concern that the pedestrian bridge proposed near Fifth Street would prevent the movement of boats into and out of the harbor. Finally, comments suggest that a pedestrian ferry be provided as an alternative to the pedestrian bridge. The following responses address these issues in the order in which they are presented above.

The construction of the Fifth Street pedestrian bridge is proposed as part of the project, but would require clearances and permits from a number of agencies, including non-City agencies such as the U.S. Army Corps of Engineers and the U.S. Coast Guard. As a result, its implementation is not certain at this time. This is why the SEIR indicates on p. V.E.46, last paragraph: "a pedestrian bridge over the China Basin Channel is proposed to be constructed along the hypothetical extension of Fifth Street, subject to obtaining the required approvals."

Although pedestrian volumes were not specifically forecast for the Fifth Street pedestrian bridge, p. V.E.102 notes that approximately 1,360 people are expected to either walk or bicycle from Mission Bay South to the northeast quadrant of San Francisco during the p.m. peak hour, and approximately 350 people would be bicycling or walking from Mission Bay North to the southeast quadrant of San Francisco during the same time. These volumes suggest that the proposed pedestrian bridge at Fifth Street would be well-utilized during the commute periods. The analysis of pedestrian impacts, without assuming that a pedestrian bridge was included, does not show significant pedestrian impacts; therefore, alternative mitigation measures suggested by one comment are not necessary.

The Fifth Street pedestrian bridge is not expected to reduce the patronage demand for the proposed shuttle bus operation. The shuttle bus would likely serve those individuals who would have to walk relatively long distances to access regional transit carriers such as SamTrans, AC Transit, Golden Gate Transit, or BART, rather than short trips across the Channel. The primary purpose of the pedestrian bridge would be to provide a convenient link between the open space north of the Channel with that south of the Channel. Thus, the bridge would serve mostly recreational pedestrians or nearby residents, independent of any service provided by the proposed shuttle buses. Construction of the bridge is included in the proposed infrastructure plan for the project, and would be operated by

the City's Department of Public Works in the same manner as the Lefty O'Doul and Peter Maloney bridges.

Page V.E.46 discusses the likelihood that the pedestrian bridge near Fifth Street would be a "swing" bridge, in order to accommodate the maritime use of China Basin Channel. That is, the bridge structure would swing away from the banks, opening a passageway for boats to move into and out of the west end of the Channel. The expectation is that it would be operated by the Department of Public Works. Based on a preliminary evaluation conducted by Catellus, the opening of the Fifth Street bridge would be carried out remotely from the Peter Maloney Bridge command post, by running conduit and wires from one bridge to the other, and allowing both bridges to open at the same time./20/ No inherent safety issues have been identified at this point with the proposed remote control operation. It would also be technically possible to centralize all bridge operations at one location, probably the Peter Maloney Bridge, so that the bridge tender would not have to move from one bridge to the other.

Regarding implementation of a cable-stayed ferry to provide pedestrian movements across the Channel, in lieu of the Fifth Street Bridge, it is likely that the installation and use of the cable on the Channel bottom to guide the ferry boat would disturb the sediments, possibly creating turbidity and other water quality problems. The cable could also pose a navigational hazard. In addition, the ferry would have to be attended 24 hours a day to prevent unwanted dangerous operation of the boat. Compared to a swing bridge, a ferry's throughput of pedestrians able to cross the Channel per hour, particularly during events at the Pacific Bell Ballpark, and most likely on a typical day, would be insufficient to improve pedestrian volumes at the other Channel crossings.

### Pedestrian Safety

#### *Comments*

1. . .However, Owens Street between its intersection with Fourth Street and the traffic circle presents approximately 1800 feet of unsignalized traffic flow, with park space on the north and a residential neighborhood on the south. It is possible that what is being created if the plan is implemented is a traffic "barrier" between the park and the residences, a barrier created less by the street and its width than by the volume (for example, Table VI.3) and potential high speeds of the traffic using Owens Street. . .

a. Why is the pedestrian crossing signal included as a possible TSM element rather than as an assured component of the proposed pedestrian circulation system?



b. The DEIR Appendix provides helpful descriptions of proposed streets, but it does not describe the proposed speed limits of the streets. What is the proposed or assumed speed limit for Owens between Fourth and the traffic circle?

c. Were alternative street designs considered which did not create an uninterrupted section of roadway? For example, was placing the traffic circle at a location approximately halfway along Owens, which would provide access to the neighborhood (south) and houseboat community (north), considered?

d. If the park is to be used by the adjacent residential neighborhood, a possible single signalized pedestrian crossing is not sufficient for pedestrian movements. Residents will be inclined to attempt to cross Owens at many locations. Are additional pedestrian crossings planned for Owens at established intervals or spacing? What is the forecast ADT for Owens and should additional pedestrian crossings, if planned, be signalized as well? . . .

f. Is there a school sited nearby which would require safe access to and from the park space north of Owens, and if so, has this pedestrian movement been planned for in terms of signalized crosswalks? . . .

2. Owens Street between the traffic circle and 16th Street appears to be similar in design and character to Owens between the circle and Fourth. Consequently, this section of Owens has the potential to develop as a high speed traffic route with possibly difficult safety and access implications for pedestrians.

a. Is this length of Owens uninterrupted by any planned signalized pedestrian crossings? Will vehicles stop for any signal or sign along this section of Owens?

b. What is the proposed posted speed limit and forecast ADT on Owens between the circle and 16th Street?

c. What pedestrian crossings are planned for this section of Owens?

3. The traffic circle proposed for Owens at Common carries forecasts for Level A or B service (Figure V.E.12) for traffic, which reflects an efficient traffic operation. However, the pedestrian characteristics of the circle are unclear. With only painted crosswalks employed, pedestrians at traffic circles can face a continuous stream of circulating traffic.

a. Why was a traffic circle chosen for application at this intersection? What advantages does a traffic circle have in comparison with a four-way stop or signalized intersection? Would either a four-way stop or a signalized intersection provide for improved pedestrian safety at this location?

b. Is it true that if traffic is moving in excess of the posted speed limit on those sections of Owens approaching the traffic circle, then some of that traffic will likely enter the circle at a higher rate of speed than is safe for either the vehicle or pedestrians attempting to cross at the circle?

c. What pedestrian crossings are planned for incorporation into the traffic circle and have the pedestrian movements been examined in light of the forecast peak hour traffic volumes? . . .

8. It is understood that the final alignment of Terry A. François Boulevard is an outstanding matter at this time. However, regardless of the final alignment of the Boulevard, traffic volumes are not forecast to be heavy, even during peak hours. Nonetheless, the Boulevard is (apparently) designed without any signalization, so that traffic speeds may likely be in excess of the posted limit. What specific plans have been completed or considered for managing the safe movement of pedestrians across François Blvd. between the planned park space and the waterfront? . . .

**Comments: Traffic and Parking**

5. Owens Street between the traffic circle and Fourth Street, and Terry A. François Boulevard are adjacent in large part to park space. The DEIR Appendix provides a description of both streets, describing them in cross-section. With respect to aesthetics and in terms of providing safety for pedestrian and vehicular traffic as well, was consideration given to designing either or both of these streets as boulevards with a (landscaped) median? A median would provide a secure half-way stopping place for pedestrians, improve the urban design of the roadway, and might also have a "calming" effect on traffic speeds by narrowing the perceived roadway width. Of course, a median would also sharply reduce the possibility of head-on vehicular collisions. (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

Townsend Street. As neighbors, we want to note the comment on V.E.103, that "no pedestrian improvements are proposed for Townsend Street, except on the south side of the street between 3rd and 4th Street". It would be extremely helpful to the Mission Bay North development if pedestrian improvements could be continued on Townsend between 4th and 7th Streets. It's dangerous to walk on that street now. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

**Response**

Comments express concern that the portion of Owens Street between Fourth Street and the roundabout at The Common would carry high volumes of traffic, which would act as a barrier between the open space north of the street and the residential area south of the street. Comments request additional information about the characteristics of this portion of Owens Street, including the level of commitment for the signalized pedestrian crossing at Owens and the hypothetical extension of Fifth Street and the adequacy of this single crossing to carry expected pedestrian volumes, the assumed speed limit, the provision of a raised median, forecasted average daily traffic, and any considerations of midblock traffic control. Comments also request that the roundabout be justified, and that pedestrian circulation issues near the roundabout be considered. Comments also express concern that Terry A. François Boulevard may not have adequate interruptions of vehicular flow to provide a safe crossing for pedestrians. In addition, comments request provision for pedestrian flow on Townsend Street, between Fourth and Seventh Streets.

Owens Street is expected to carry relatively low volumes of traffic between Fourth Street and The Common. Because other Mission Bay network streets would provide a less circuitous route for vehicles traveling through Mission Bay, this portion of Owens Street is expected to be used primarily by those drivers traveling to or from the immediate area. The estimated future Annual Average Daily



Traffic (AADT) for this section of Owens Street is 3,000 to 3,500 vehicles. This relatively low traffic volume is also reflected by the anticipated operation of traffic signals on this portion of Owens Street. On p. V.E.70, the SEIR notes that the intersections of Owens Street with The Common, Third Street, and Fourth Street are expected to operate at level of service (LOS) B during the p.m. peak period in the year 2015.

No specific speed limits have been proposed or assumed within the Mission Bay Project Area. Maximum speed limits are typically established by the San Francisco Department of Parking and Traffic after having conducted spot speed studies and taking into consideration other factors such as speed distribution, traffic volumes, accident experience and road physical features. Given the types of land uses surrounding Owens Street between Fourth Street and The Common, open space on one side and residential on the other, with the main access to the residential buildings expected to be from Bay Mud Street south of Owens it is likely that the maximum speed on this section of roadway would be limited to around 30 mph.

Owens Street between Fourth Street and The Common was originally designed as a four-lane roadway (two lanes each way) with a 15-foot-wide landscaped median, and parking on both sides. In fall 1997, as a result of several meetings held at the San Francisco Redevelopment Agency with the Mission Bay Citizens Advisory Committee, the Committee members agreed to narrow the street right-of-way by eliminating parking on the residential side of the street and removing the median, in order to provide a wider and larger open space area adjacent to the Channel.

The signalized pedestrian crossing of Owens Street at Fifth Street is identified on p. VI.30 as a mitigation measure (E.47d). Since the publication of the Draft SEIR, Catellus has revised the project, in order to include this signalized pedestrian crossing in the project definition.

The signalized pedestrian crossing at Fifth Street would provide adequate interruption for traffic flow when pedestrians need most to cross the roadway. Additional interruptions of Owens Street traffic flow would be inconsistent with the design of the rest of the Mission Bay street network system, and would hinder traffic flow to the extent that unnecessary vehicle queuing may result. No additional stop signs or signals are proposed for this section of Owens Street.

The transportation analysis for the Redevelopment Plans was not conducted at a level of detail that would permit specific siting of individual crosswalks along a street like Owens Street south of The Common, where there would be few intersections that would be obvious crosswalk locations. Because there are expected to be pedestrian access points to the UCSF campus east of Owens Street,

as well as access to buildings on the west side of Owens Street, there would be locations along this portion of Owens Street for which pedestrian crossings would be warranted. However, specific locations for these crosswalks have not yet been determined. A traffic signal is under consideration by UCSF and Catellus for an intersection of a UCSF site street with Owens Street, at a location approximately equidistant between The Common and 16th Street. If a traffic signal is provided at this location, pedestrian crosswalks would be incorporated into the intersection design.

Modern roundabouts are efficient traffic control elements that secure the safe crossing of traffic and pedestrians between intersecting traffic flows with minimum delay. They are superior in terms of vehicle delays to stop sign-controlled intersections, particularly when the approaching traffic flows are of the same order of magnitude and/or the left or right turning movements are relatively high when compared to the through movements. Two fundamental design features in modern roundabouts are: a traffic yield at entry, and a slight curving to the right at inbound approaches.

Modern roundabouts are safe relative to other types of intersections. According to road accident statistics published in Great Britain, the proportion of fatal accidents at roundabouts is about one-third of the proportion of fatal accidents at all other intersections. In addition, the average accident cost at a roundabout is about 50 percent less than the average accident cost at all other intersections.<sup>/21/</sup> Notwithstanding their good record, excessive speed at entry could affect the safety of a roundabout. Therefore, the currently proposed roundabout layout includes appropriate entry deflection—well-designed entry angles and good sight distance—and installation of appropriate advisory speed and warning signs in all approaches.

As typically required by the San Francisco Department of Public Works (DPW) and Department of Parking and Traffic, painted pedestrian crossings would be provided at each leg of the roundabout, at an appropriate distance (approximately 150 feet) from the roundabout to ensure that approaching vehicles can see pedestrians, and pedestrians can see approaching vehicles. These crosswalks would be located away from the flared entries to the roundabout, where roadway widths are less, and vehicular traffic movements are more straightforward. Flashing-yellow beacons and advance warning signs indicating the existence of the crosswalk may also be installed at all or some of the approaches in one or both ways, particularly at those crosswalks that would be most likely to be used by students from the proposed nearby school.

Terry A. François Boulevard is being planned without any traffic signals because of the expected light traffic volumes, but not without controls in the form of traffic signs. As an example, the intersection of Terry A. François Boulevard with The Common is currently planned to be an all-way stop sign



controlled intersection. No specific traffic control systems have been developed at this point for other intersections along Terry A. François Boulevard, such as Mariposa, South or Mission Rock Streets. It is expected, however, that appropriate signage would be requested by DPT and would be developed as specific projects are proposed. In addition, all pedestrian crossings in Terry A. François Boulevard would be appropriately striped.

Townsend Street presently does not have a sidewalk between Fourth Street and Seventh Street generally west of the Caltrain Station. The Mission Bay North Project Area boundary between Fourth Street and Sixth Street is King Street. Townsend Street between the west side of Fourth Street and the east side of Sixth Street, and the area south of Townsend Street to King Street, are outside of the Project Area. These two blocks and the portion of the block between Sixth and Seventh Streets that is adjacent to Townsend Street would remain in use as rail yards for Caltrain. Thus, there would be no new uses to attract pedestrians. The area north of Townsend Street between Fourth Street and Seventh Street is outside of the Project Area. Buildings on the north side of the street are primarily in industrial use. It is possible that sidewalks would be included in any new development on the north side of Townsend Street in the future.

#### Transit Shelters

##### ***Comment***

Unlike other locations in San Francisco, where the City's private shelter contractor can be blocked by an adjacent property or shop owner from installing a shelter, transit shelters should be mandated at all stops in Mission Bay. This will insure that passengers are protected from the elements, made to feel secure and safe while they wait, and provided with transit information to facilitate their journey, factors which all work to encourage the use of transit. Pedestrian routes throughout Mission Bay should be reviewed to assure that all transit stops are linked directly and efficiently with planned pedestrian paths and sidewalks. Will the Municipal Railway be involved in all relevant aspects of street planning and design, in order to insure the full integration of transit elements? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

##### ***Response***

The comment requests that transit shelters be mandated at all transit stops within Mission Bay, that pedestrian routes effectively link all transit stops to the proposed development, and that Municipal Railway be involved in the planning and design of the Mission Bay street network.

On p. VI.30, Mitigation Measure E.47g of the Transportation System Management Plan describes the provision of maps of both the pedestrian/bicycle network and transit maps on kiosks throughout the Project Area to promote multi-modal travel. The figures depicting the cross-sections of Mission Bay

streets on pp. D.9-D.16 in Appendix D indicate that Berry, Third, Fourth, Owens, South, 16th, and Illinois Streets, as well as The Common, Terry A. François Boulevard, and residential streets would provide sidewalks, ranging in width from 9.5 feet to 14.5 feet.

The development of the transit network in the Mission Bay Area has been closely coordinated with MUNI engineering, planning and operations staff. In particular, the planning of the Third Street Light Rail Project was the subject of joint engineering and planning studies involving MUNI's Third Street Light Rail Project team and the engineering and planning consultants for the Mission Bay project. In addition, MUNI has recently hired new consultants to develop an urban design plan for the Third Street Light Rail Project; these consultants have already met with the project sponsor and the consultants for Mission Bay, as well as UCSF representatives.

The precise locations of the bus stops have not yet been established by MUNI. As a planning principle, they are expected to be located near the Light Rail station platforms (planned for Mission Rock Street, opposite the UCSF main entrance at South Street, and at Mariposa Street) and intersecting major pedestrian flows within the Project Area. One MUNI bus stop location that has been identified is the new 22-Fillmore end of the line. It would be located on South Common Street, immediately east of Third Street. MUNI does not have established criteria for determining which transit stops should have transit shelters. Generally, the provision of transit shelters at stops is based on the number of passenger boardings at the stop, the character of the surrounding area, and the requests from the public. MUNI contracts out the provision of transit shelters so that advertising revenues are used to pay for the installation and maintenance of the shelters on a systemwide basis at no cost to MUNI./22/ Mandatory shelters would not mitigate a significant impact; decisionmakers could consider requiring shelters at particular locations in Mission Bay as conditions of project approval.

### Bay Trail

#### *Comment*

By way of background, the San Francisco Bay Trail is a planned 400-mile system of multi-use paths that, when completed, will circle San Francisco and San Pablo bays in their entirety. . .

On page V.E.44, the Draft SEIR correctly explains that the adopted alignment of the Bay Trail "runs through the Mission Bay Project Area from The Embarcadero to Berry Street to Third Street; it continues from Third Street to Mission Rock Street to Terry A. François Boulevard and then to Illinois Street." However, Figure V.E.9 shows a different alignment, which reroutes the Trail from Third Street and Mission Rock to the waterfront, entirely along Terry A. François. Presumably, this seeks to take advantage of the requirement by the San Francisco Bay Conservation and Development



Commission “that by the year 1998 the section of the Bay Trail on Terry A. François Boulevard between the Lefty O’Doul Bridge and Mission Rock Street be implemented by the Port of San Francisco as a Class II bicycle facility. . .”

While the Board of Directors of the Bay Trail Project has not approved this proposed realignment, Bay Trail Project Staff believes it is superior because it brings the Trail closer to the waterfront. We request, however, that the Final SEIR describe the proposed realignment and explain the rationale for it, and that the City and County of San Francisco submit a formal request to the Bay Trail Project for redesignation of alignment . . .

Finally, we request that brief mention be made of the Bay Trail Plan in Section V.E (“Transportation”), under “Existing Transportation Plans, Policies and Programs;” and Section V.M (“Community Services and Utilities”), under “Recreation and Parks—Plans and Policies.” (*Niko Letunic, Bay Trail Planner, San Francisco Bay Trail*)

### **Response**

The San Francisco Bay Trail requests that the reason for the realignment of the Bay Trail between the Lefty O’Doul Bridge and Mission Rock Street be clarified, and that a brief description of the Bay Trail be added to Section V.E, Transportation, under “Existing Plans, Policies, and Programs.”

The San Francisco Bay Conservation and Development Commission required the Port of San Francisco to implement a Class II bicycle facility on Terry A. François Boulevard between the Lefty O’Doul Bridge and Mission Rock Street by 1998. This newly provided bicycle route was determined to be the most logical route of the San Francisco Bay Trail, as it is closer to the waterfront and Mission Bay open space. The following text has been added to the first full paragraph on p. V.E.45 to explain the Bay Trail alignment shown in Figure V.E.9 (p.V.E.47):

**The Bay Trail alignment shown in Figure V.E.9 between the Lefty O’Doul Bridge and Mission Rock Street does not reflect the alignment currently approved by the Board of Directors of the Bay Trail Project. However, because the San Francisco BCDC requires that a Class II bicycle facility be implemented by the Port of San Francisco in this section of Terry A. François Boulevard by the year 1998, it is possible that the Bay Trail will be realigned to this route shortly thereafter. This route would be closer to the waterfront and Mission Bay waterfront open space than the current adopted route.**

The following text has been added as a new subsection on p. V.E.34 immediately before “Local Plans and Policies:”

### **San Francisco Bay Trail Plan**

**The San Francisco Bay Trail is a 400-mile regional hiking and bicycling trail that is intended to permit users to circle San Francisco and San Pablo Bays. The San Francisco**

**Bay Trail Plan was adopted by the Association of Bay Area Governments in 1989. The Plan is one component of the region's transportation and recreational facilities.**

**About one-half of the planned 400 miles has been developed. The San Francisco Planning Commission adopted a proposed route for the Bay Trail in 1992. The route of the Bay Trail in the Mission Bay Project Area is along Third Street from King Street to Mission Rock Street, and along Terry A. François Boulevard from Mission Rock Street to Mariposa Street.**

The following sentence has been added as a new second sentence in the second full paragraph on p. V.E.35:

**The Bay Trail route in the Recreation and Open Space Element of the *General Plan* would need to be amended to reflect the new proposed route in and near the Mission Bay Project Area.**

#### Mariposa Street Pedestrian Walkway

##### ***Comment***

And the open space that's planned along Mariposa Street is not adequate for Potrero Hill pedestrian access to the Bay, and we recommend that that be increased from its existing 20 to 40 feet. (*David Siegel, Lower Potrero Hill Neighborhood Association; Mission Bay Citizens Advisory Committee*)

##### ***Response***

The 20-foot setback proposed for the north side of Mariposa Street between Owens Street and Terry A. François Boulevard would be in addition to the 10-foot wide sidewalk planned for this street./23/ Therefore, the entire walkway would be 30 feet wide, providing considerable area for landscaping. The necessary width to accommodate the anticipated pedestrian flows on Mariposa Street is less than 20 feet. Therefore, additional width on Mariposa Street to provide access to the San Francisco Bay is not necessary for pedestrian comfort, although it might enhance the recreational nature of the connection. For comparison purposes, many downtown sidewalks are 10 to 15 feet wide and the downtown Market Street sidewalk is about 30 feet wide. Unlike downtown sidewalks, the Mariposa Street pedestrian walkway is expected to include substantial landscaping. At 30 feet wide, it could accommodate two rows of trees and other landscaping as well as a pedestrian sidewalk.

#### Ballpark Pedestrians

##### ***Comments***

We similarly anticipate that the City and County of San Francisco and the Ballpark Transportation Coordinating Committee (BTCC) during development of the Ballpark Transportation Management Plan (TMP), would recommend street and transit configurations to reduce pedestrian congestion near



the new ballpark site during regularly scheduled baseball games as well as during the temporary events such as those identified on page V.E.116. The following items address how: Any plans to widen the 3rd Street Bridge sidewalks (even during the proposed seismic upgrade currently scheduled for early in 1999) could enhance pedestrian movement across the 3rd Street and 4th Street bridges. Pages V.E.48 and V.E.102 reference narrow sidewalks on these bridges as potentially restricting pedestrian movement before and after ballpark events. Restricted parking could enhance pedestrian movement also.

Please consider how traffic management might enhance pedestrian traffic movement across the 3rd and 4th Street bridges. (*W.R. Till, Chief, Bridge Section, U.S. Coast Guard*)

### ***Response***

The comments inquire whether transportation management measures could improve the movement of pedestrians across the Peter Maloney and Lefty O'Doul bridges, particularly before and after events at the Pacific Bell Ballpark.

Before and after high-attendance ballgames or events at the Pacific Bell Ballpark, parking control officers will direct vehicle traffic circulation in the area surrounding the ballpark to provide additional capacity for the pedestrian traffic traveling to and from the ballpark. The Ballpark Transportation Coordination Committee (BTCC) is responsible for implementing measures to effectively manage pedestrian flows across the two bridges before and after Ballpark events. The current plan of the BTCC calls for a permanent barrier to be installed separating the two existing northbound lanes on the Lefty O'Doul Bridge from the three southbound lanes, as part of the planned seismic retrofitting of the bridge. In addition, a new metal roadway surface will be installed on the two northbound lanes, to facilitate pedestrians walking on the roadway rather than widening sidewalks. Before and after ballpark events, the two lanes to the east of the barrier will be closed to traffic so that they can be used by pedestrians destined to or coming from the ballpark.

The pedestrian bridge that may be provided near Fifth Street would also help expedite the large volumes of pedestrian movements across the Channel during such special events. Pages V.E.101-V.E.102 address the benefit that the proposed pedestrian bridge near Fifth Street would have on the movement of pedestrians across China Basin Channel.

### **Rail Access**

#### ***Comments***

Page III.15: "Public Facilities": The project description claims that "[The Caltrain tracks running through the block bounded by Townsend, Sixth, Berry and Seventh] would not be altered as part of this project." However, the project proposes to resume the rail right-of-way to the north-east of these

tracks between King and Berry Streets, and so to forever constrain rail operations to making an extremely small-radius, slow-speed curve on approach to and departure from the vicinity of the present terminal. Given that decreasing end-to-end travel times has been identified as the major goal of Caltrain operations, given the disproportionate time trains spend traversing this section and given the comparative ease with which that curve could be widened and hence sped up by cutting further into what is proposed to be "Mission Bay North Retail space," public utility dictates that that be done before the potential right-of-way is abandoned forever.

Considering the larger problems of access to this parcel, including opening a Berry Street at-grade rail crossing and/or resuming invaluable Caltrain right-of-way for a King Street on-ramp "frontage road," designation of the entire Sixth/Seventh/Townsend/Berry area as a combination of Public Facility and Open Space seems in the best transportation interests of the region. . .

The proposed changes involve the removal of the "wye" connection connecting the Caltrain tracks to the present Sixteenth/Mariposa freight track. This represents a permanent reduction in rail operation flexibility, as there will be no location north of Redwood City at which trains or rail equipment will be able to reverse direction. It represents an adverse impact to the regional transportation network. *(Richard Mlynarik)*

#### Impact on Port

What is the functional impact on the Port of the relocation of rail access along 16th Street? In table VI.7, Mitigation measures, the comment states that "Track relocation would not preclude rail access to Piers 48 and 50" which seems to indicate that it would make such access more difficult. What is the functional impact on Port operations in the Central Waterfront of the traffic changes and road realignments in the plan? There is no reference to the Seaport Plan and the projected maritime uses of Port property in the period covered by this document. This needs to be studied. *(Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee)*

#### Response

Comments suggest that rail operation flexibility would be diminished by the construction of the King Street westbound road and the removal of the "Y" connection from Caltrain tracks to the freight railroad tracks near 16th and Mariposa Streets. In addition, comments express concern about the potential impacts of the 16th Street railroad track relocation on port operations.

The removal of two railroad tracks (tracks No. 11 and 12) immediately adjacent to and north of the proposed King Street westbound frontage road has been discussed by Caltrain and the City of San Francisco for several years as part of the Waterfront Transportation Projects, not as part of the Mission Bay project. As part of the discussions, Caltrain was to remove the tracks while the City's Department of Public Works was to build the frontage road using Waterfront Transportation Project funds. As discussed above under "King Street Frontage Road," pp. XII.106-XII.107, an agreement on the specific features of the changes is expected to be presented to the Peninsula Corridor Joint Powers Board for final approval in September, 1998. The King Street westbound frontage road is proposed to be included in the Infrastructure Plan for Mission Bay. The two key reasons for the



construction of the King Street westbound frontage road are: 1) to provide an escape route for those vehicles traveling westbound on King Street that do not want to enter the I-280 freeway, and 2) to provide access to those parcels located south of the Caltrain tracks and west of Fifth Street.

Regarding the concern that the track removal and development of the most westerly parcel in Mission Bay North would constrain Caltrain rail operations in the vicinity of the Caltrain terminal, it should be noted that Caltrain engineering staff have taken an active part in the development of key elements of the Mission Bay project that relate to railroad operations. These include railroad crossing locations, right-of-way adjustments and railroad crossing configurations. Caltrain staff have not expressed any concerns or presented any issues regarding potential deficiencies of the existing curved approach to the Caltrain terminal.

The current freight rail track configuration leading from the “Y” connection near 16th Street requires trains to operate in reverse traveling either east on 16th Street or south on Illinois Street, similar to the proposed route. The proposed change would not affect passenger trains.

The project sponsor has discussed the proposed railroad track alignment changes in the vicinity of 16th Street, including the removal of the “Y” connection, with Union Pacific Railroad (UPRR), the operator of both the mainline and the freight tracks./24/ UPRR does not oppose the alignment modifications since access to Pier 80 is not being terminated, but rather modified to be provided as a switchback to and from the north in a safe manner. It is important to note that the “Y” connection would not be eliminated until the proposed railroad alignment on 16th Street is completed, including the 300-yard spur on Terry A. François Boulevard.

There is currently no railroad access to Piers 48 and 50. The statement made on Table VI.7, on p. VI.57 “Track relocation to 16th Street would not preclude access to Piers 48 and 50. . .” means that if at some point in the future, it is desirable to provide railroad access to Piers 48 and/or 50, it would be possible to extend north the railroad tracks that would be located on Terry A. François Boulevard, without any physical constraints caused by the Mission Bay project.

## Mitigation

### Project Features and Funding

#### *Comments*

The DEIR establishes a list of traffic- and transit-related mitigation features which are "included in the project and assumed in the analysis" (page II.14), or described as "Project Features That Avoid Significant Impacts" (page VI.8). It is not explicitly stated that this list of mitigation measures is considered to be a prerequisite to the implementation of some or all of the Mission Bay project. Certainly, given the nature of the assumptions employed in the transportation analyses, and the importance of these Features to mitigation, the Subcommittee believes that these Features should be required as prerequisites to incremental development, and that this requirement should condition the project's approval. Is it accurate to assume that these measures which are "included as part of the project" (page VI.7) are, in fact, prerequisite investments to the implementation of Mission Bay, where "prerequisite" is defined by the "adjacency" principal set forth on page VI.7?

With further regard to the mitigation features "included in the project and assumed in the analysis", there is a lack of clarity as to the assignment of responsibility for funding and implementing these features. On page VI.7, the DEIR points out that:

" . . . many of the measures are not currently programmed in the formal capital and operating plans for San Francisco Municipal Railway (MUNI), the San Francisco Department of Parking and Traffic, the Department of Public works, or any other involved public agencies. The source of the funding for each measure is not necessarily known at this time. Funding sources will be identified by decision makers in connection with their review and action on aspects of the project within their jurisdiction."

When taken in the context of the possible conditioning of the project's approval upon the accomplishment of these mitigation measures as prerequisite investments, the above DEIR statement is very disturbing. How do these mitigation measures get implemented if they are not programmed in individual City departmental capital programs, funding (from any source) has not been identified, and responsibility for funding has not been assigned (see first paragraph under "E. Transportation", page VI.6)? What certainty or guarantees can be established that the necessary steps for public funding of these measures will be accomplished by the various San Francisco departments necessarily involved?

It is understood that the Department of City Planning and the City Planning Commission, and the Redevelopment Agency and its Commission, can encourage, request, and in other formal and informal ways attempt to affect the Municipal Railway, the Department of Public Works, and Parking and Traffic Department (as well as the San Francisco Transportation Authority) to undertake responsibility for the completion of steps leading to the allocation of funds to assure that the measures will be implemented. Is it not true that these agencies and Commissions have no direct authority over the capital budgeting and budgeting decisions of the implementing departments?

Establishing the mitigation measures as assumed parts of the project and conditioning the project's phased development with their realization is fine, as far as it goes, but it does not seem to offer any guarantee that implementing the measures will actually occur, as suggested. What commitments exist



on the part of the relevant departments and their commissions to the accomplishment of the mitigation measures? How can the approval process for the Mission Bay project assure that such commitments and guarantees to the implementation of the mitigation measures will occur?

With further regard to the mitigation features “included in the project and assumed in the analysis”, the DEIR states on page VI.7, “. . .the responsibility for implementation has not been determined. While some of the measures are included as part of the project or are already programmed by a public agency, many. . .are not currently programmed. . .”. In order to make this statement, an inventory of existing City departmental capital programs was presumably accomplished, or at a minimum, questions asked of City departmental staff. The Subcommittee would like to be informed of the magnitude of the “new” projects list which would introduced to the capital programming efforts of the individual City departments, upon the approval of the Mission Bay project. Consequently, which specific mitigation measures, traffic and transit, as listed and discussed on pages VI.8 - VI.18, are in fact included in the existing capital programs of the departments of Public Works, Parking and Traffic, and Municipal Railway? . . .

With further regard to the mitigation measures listed, beginning on page VI.18, the same questions as were asked in item #2, above, must be asked again with respect to these mitigation measures. What certainty exists that these measures will be funded and implemented in a timely fashion, and that the cooperation and assistance of the relevant funding and implementing agencies will be realized when the Mission Bay project approval process and actions have no direct linkage to the departments and agencies involved? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

### ***Response***

The comments inquire about the level of commitment of the project features and mitigation measures, ask if these improvements are in essence prerequisites for the development of Mission Bay as defined by the “adjacency” principle, and question the ability to ensure that mitigation measures are implemented if funding sources have not yet been identified. Comments also inquire about the authority of City planning agencies over the capital budgeting decisions of MUNI, DPW, and DPT, and request knowledge of which features are included in the capital programs of these agencies.

The SEIR includes a list of “Project Features That Avoid Significant Impacts” as Measures E.1 through E.28, on pp. VI.9 - VI.18. As explained on p. VI.1, project features are features that are included in the proposed project by the project sponsor and therefore are assumed in the analysis of potential impacts. Transportation measures E.29 through E.50 are “Mitigation Measures Identified in this Report.” They are mitigation measures that would reduce or eliminate significant impacts identified in the SEIR.

The mitigation measures labeled “Mitigation Measures Identified in this Report” are not a prerequisite to the approval or implementation of all or part of the Mission Bay project. The SEIR identifies mitigation measures that would reduce or eliminate any potential significant impacts created by the

Mission Bay project and establishes thresholds or triggers for those key project features that might not otherwise be triggered early enough in the development process to meet anticipated transportation demands based on the adjacency principle. Decision-makers will evaluate each of these mitigation measures, and determine whether each is feasible and appropriate to be adopted and implemented, as part of the project review and approval process. (See also the response under "Funding of Mitigation Measures" in Mitigation Measures, pp. XII.457-XII.458.)

It is correct to assume that Catellus would undertake those traffic-related measures listed as Measures E.1 through E.26 in the SEIR under "Project Features That Avoid Significant Impacts," and applicable to the project that is ultimately approved, such as street widenings, street improvements and restriping, and new traffic signals. As explained above in the response under "Trolleybus Extensions," the route modifications in Measures E.27 and E.28 are part of MUNI's overall transit plans for the City, and are expected to be implemented by MUNI. Both MUNI's Short Range Transit Plan and Capital Improvement Program (CIP) include these two trolley bus extensions, which are estimated to cost approximately \$30 million. While the CIP indicates that no funding has yet been identified for these projects, the City is applying for funding allocations from the Metropolitan Transportation Commission for funding of additional trolley buses, and the *Third Street Light Rail Project DEIS/DEIR* assumes that the 22-Fillmore and 30-Stockton trolleybus lines would be rerouted in the future to serve Mission Bay./25/ As noted in the "Trolleybus Extensions" response on pp. XII.109-XII.113, Catellus would be responsible for installing overhead line poles and/or eyebolts on buildings to support new trolleybus wires.

Required project features and the mitigation measures to be included as part of the project would be part of Owner Participation Agreements (OPAs) between Catellus and the Redevelopment Agency. Those documents would allocate responsibility for implementation of the various measures. Decision-makers will consider the feasibility of the mitigation measures, including funding feasibility and sources, as part of the project review process. Determinations will be based in part on information received from the various affected City departments regarding their projected capacity to implement the proposed measures. The Mitigation Monitoring Plan required to be adopted at the time of project approval will specify responsibilities and timing for implementing each adopted measure. The proposed OPAs and infrastructure plans, the Mitigation Monitoring Plan, and other relevant documents will be available for public review, as required by law, in advance of public hearings on the project.



### Triggers for Mitigation Measures

#### *Comments*

The DEIR undertakes, based upon detailed technical analyses of the project's specific land use development patterns, to associate incremental project growth with transportation impacts that "trigger" the need for specific mitigation measures (beyond those referenced, in #1 and #2, above; description beginning on page VI.18). Most of these mitigation measures are capital improvements in traffic- or transit-related features, the preponderance of the features being traffic-related.

It is not clear from a reading of the EIR what level of assurance is implied or offered that these mitigation measures will be implemented at the times their effects would be needed, nor is it at all clear whether or not responsibility for their implementation has been assigned. Given the apparent importance of these mitigation features to the related increments of project development and growth, will the incremental implementation of Mission Bay be conditioned upon the implementation of the identified mitigation measures? The Subcommittee believes that the mitigating impacts of these measures strongly support the conclusion that such conditioning should be exacted as part of the approval process. . .

The DEIR discusses (for example, on page VI.7), that traffic conditions will be monitored and when traffic "thresholds" are reached, the need for specific mitigation measures will be triggered. Specifically, how will this monitoring process work and what parties and agencies will be assigned responsibility? What is the source of funding for this monitoring work? What is the role of the project sponsor? How can such monitoring be assured? Will the monitoring information be readily available to the public or to an on-going citizens advisory committee (Transportation Management Association or Committee)? . . . (Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee)

#### *Response*

The comments request information on the likelihood that transportation features included in the project would be implemented at the times their effects would be needed, and question whether the incremental development of Mission Bay is conditioned upon the implementation of these project features. Comments inquire about monitoring traffic conditions to identify when the noted vehicle trip thresholds would be exceeded, specifically: whose responsibility it would be, how the monitoring could be assured, and the availability of the monitoring data to the Mission Bay Citizens Advisory Committee Transportation Subcommittee.

The general approach to establishing when the various transportation project features would be constructed based on "adjacency" and on thresholds, is described on p. VI.7 in the SEIR. This requirement would be embodied both in the Mitigation Monitoring Plan and in the infrastructure plans included as part of the owner participation agreements. Additional information on the review process for development phases and the adequacy concept is on pp. III.34-III.38 in Chapter III, Project Description. As the Mission Bay project develops, Catellus or other developers in the Project Area

would prepare different planning and design documents for each upcoming major development phase. A phase may include one or several buildings and may cover one or more development blocks. As part of each phase, the project sponsor would present to the Redevelopment Agency the plans for the infrastructure improvements, including transportation measures, to be included as part of that phase. Various city departments would review the proposed transportation measures and compare them with those that must be built according to the threshold tables included in the SEIR (Table VI.2 on p. VI.13, Table VI.3 on p. VI.16, and Table VI.4 on p. VI.21) as well as for compliance with the adjacency principle discussed on p. VI.7. If the City found that the development plan for that phase did not comply with the infrastructure plan or other plan documents, then the subdivision map for that phase would not be approved.

As noted in the previous response regarding "Project Features and Funding," various project documents, including the Mitigation Monitoring Plan required to be adopted at the time of project approval, will specify responsibilities and timing for implementing each adopted measure. All the documents will be available for public review as required by law prior to the approval hearings.

***Comment***

Table VI.1 (page VI.8), which provides information pertaining to the vehicle trip generation rates employed in the transportation analysis, does not indicate what the assumed trip rate is for "Residential" land use in "Mission Bay South". (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

***Response***

The table of vehicle trip generation rates on p. VI.8 of the SEIR inadvertently listed incorrect land uses. The rate that is noted for "Mission Bay South Restaurant" is actually the rate for the hotel, and the rate that is noted for "Mission Bay South Hotel" is that for residential uses in Mission Bay South. Table VI.1 on p. VI.8 has been edited to reflect this correction; the corrected version, with revisions underlined, is provided on the following page.

**Traffic Measures**

**Intersections**

***Comment***

Figure VI.2: LOS indications for the Fourth/King and Fourth/Brannan intersections are not shown (but are present in the corresponding Figure VI.1). Also, figure VI.2 (project cumulative) shows the King/Berry intersection at LOS "C" when it was already at level "D" in Figure VI.1 (existing plus project). This cannot be correct. (*Richard Mlynarik*)



**TABLE VI.1 (revised)**  
**MISSION BAY P.M. PEAK HOUR VEHICLE TRIP GENERATION RATES**

| <b>Project Area</b> | <b>Land Use Type</b>     | <b>P.M. Peak Hour Vehicle Trip Rate</b> |
|---------------------|--------------------------|---|
| Mission Bay North   | Retail                   | 1.36 per ksq. ft.                       |
|                     | Restaurant               | 6.02 per ksq. ft.                       |
|                     | Residential              | 0.75 per d.u.                           |
|                     | Movie Theater            | 0.06 per seat                           |
| Mission Bay South   | Retail                   | 2.00 per ksq. ft.                       |
|                     | <u>Hotel</u>             | 0.27 per room                           |
|                     | <u>Residential</u>       | 0.81 per d.u.                           |
|                     | Office                   | 0.95 per ksq. ft.                       |
|                     | Research and Development | 0.59 per ksq. ft.                       |
|                     | Large Retail             | 4.50 per ksq. ft.                       |
| UCSF Subarea        | UCSF                     | 0.61 per ksq. ft.                       |
|                     | School                   | 0.05 per student                        |

*Notes:*

k sq. ft. = 1,000 square feet

d.u. = dwelling unit

UCSF Subarea is part of Mission Bay South

*Sources:*

Wilbur Smith Associates, based on:

- City and County of San Francisco, Planning Department, Guidelines for Environmental Review: Transportation Impacts, Appendix 1, July 1991.
- Movie Theater: AMC Kabuki Theaters attendance data, January 1994.
- City and County of San Francisco, Planning Department, Guidelines for Environmental Review: Transportation Impacts, July 1991.
- City and County of San Francisco, Planning Department, Citywide Travel Behavior Survey, Visitor Travel Behavior, August 1993.
- University of California San Francisco, *UCSF Long Range Development Plan Final Environmental Impact Report*, State Clearinghouse No. 95123032, certified January 1997.
- 1990 U.S. Census - Journey-to-Work Trip Characteristics

### ***Response***

A level of service (LOS) for the intersection of Fourth and Brannan Streets was shown in error on Figure VI.1. This intersection is not a study intersection, and the figure has been corrected to eliminate the LOS marker for this intersection. The LOS marker for the intersection of Fourth and King Streets was inadvertently not shown on Figure VI.2. The intersection of Fourth and King Streets is expected to operate at LOS D under cumulative mitigated conditions. Figure VI.2 has been corrected to indicate this. Both corrected figures are shown on pp. XII.169 and XII.170.

The level of service for the intersection of King and Berry Streets is shown as operating at LOS B under both Existing With Project Mitigated conditions and Year 2015 Cumulative Mitigated conditions. The comment is most likely referring to the intersection of Berry and Seventh Streets, that is shown to operate at LOS D under Existing With Project Mitigated conditions, and to operate as LOS C under Year 2015 cumulative mitigated conditions. These LOS calculations are correct. Under the Existing-With-Project conditions, the intersection would operate at LOS D, and therefore would not require a mitigation measure. However, after adding cumulative traffic growth to the intersection, the operation of the intersection would degrade to LOS F (see p. V.E.69), therefore requiring mitigation. The application of the mitigation measure described in Table VI.5 on p. VI.22 would improve the operation of the intersection to LOS C; therefore, Figure VI.2 is correct in showing the Berry and Seventh Streets intersection at LOS C.

Related to Ballpark

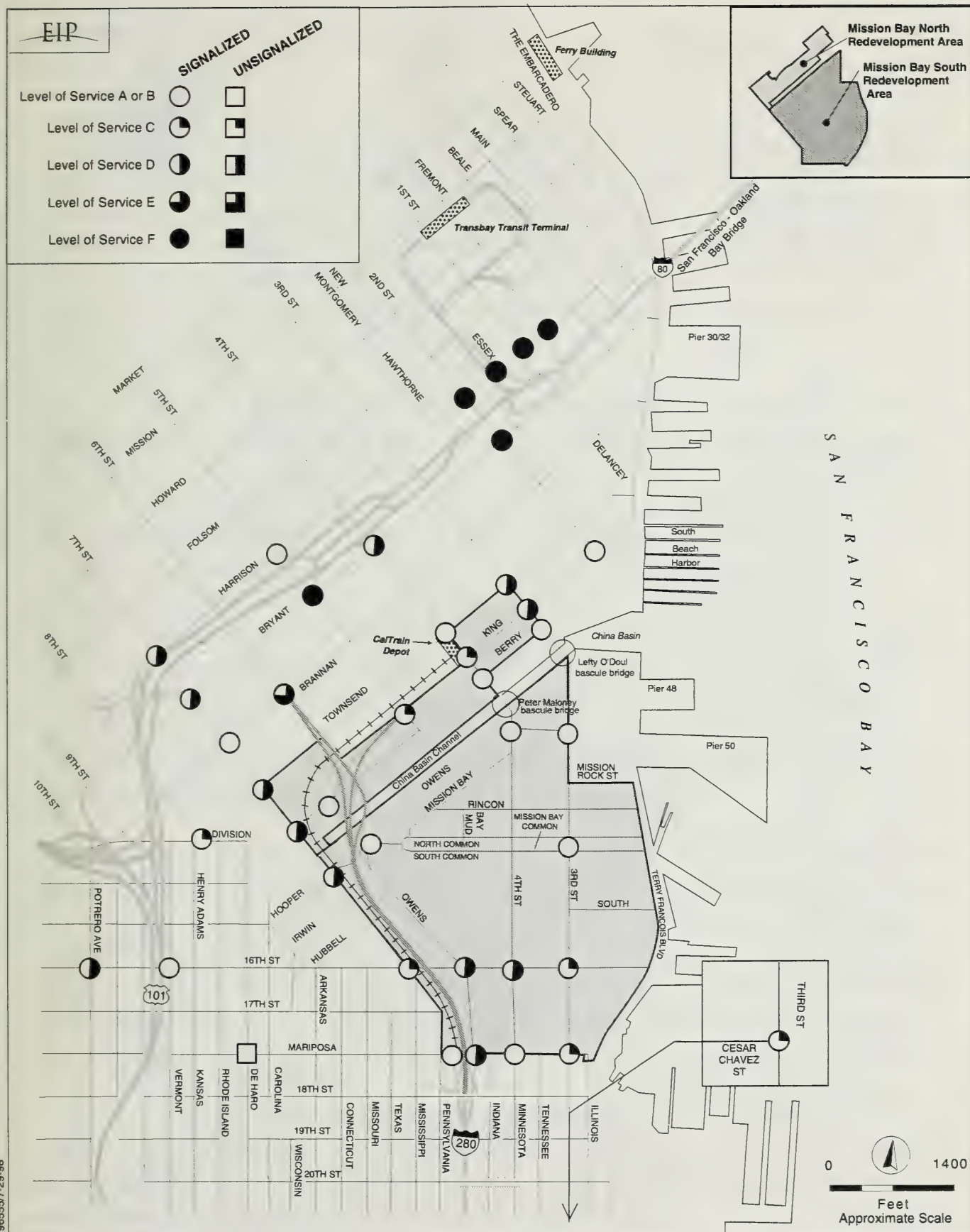
### ***Comments***

Move Open Space to seawall lot 337, a new South Channel Marina Green. A shuttle staging area at the green would use less hard surface at Marina Green and would allow more people-friendly waterfront access during the 275 days/year when there is no game or large event as well as before/after games/events. —Would help alleviate congestion on Third St./ Fourth St. and at Lefty O'Doule Bridge. —Would alleviate EIR projected unacceptable E/F LOS (level of service) traffic and air pollution on game and event days. (*Lower Potrero Hill Neighborhood Association*)

The proposed mitigation measure [E.2a] is inconsistent with the plan for Third Street which has been agreed to by the Giants and the Department of Parking and Traffic. Under this plan, a pedestrian barrier will be installed in the Third Street median and a drop-off lane is planned for the east side of Third Street. These features are essential to the efficient operation of Pacific Bell Park.

This mitigation measure [E.21a] is in conflict with the approved design plan for Pacific Bell Park. The mitigation would require the elimination of a large segment of the major public plaza under construction at the entrance to Pacific Bell Park. This plaza is an important design feature of the ballpark and is essential to providing efficient pedestrian circulation. (*John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants*)



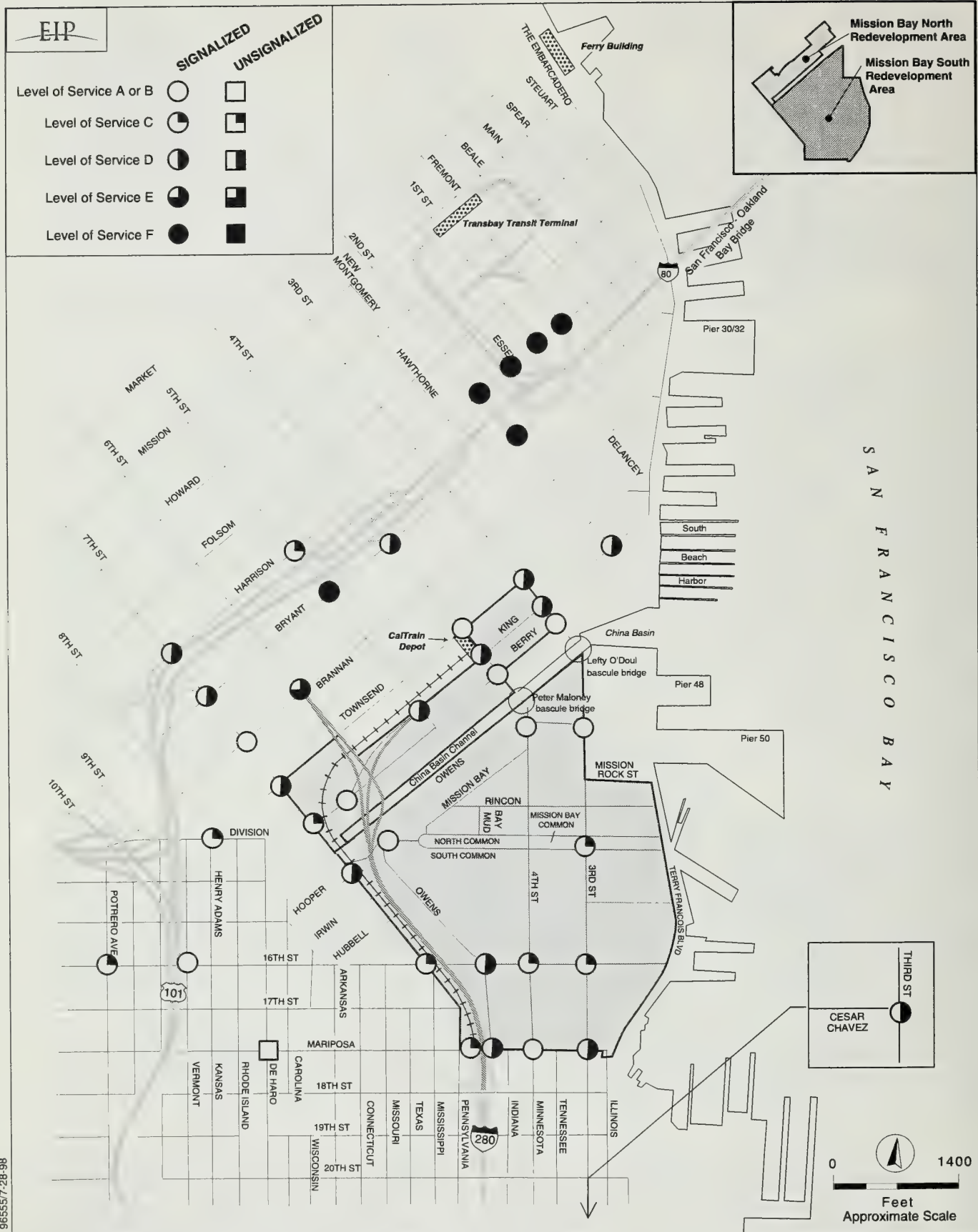


96555/7-29-98

SOURCE: Wilbur Smith Associates

# MISSION BAY SUBSEQUENT EIR

**FIGURE VI.1 (REVISED) WEEKDAY P.M. PEAK HOUR LEVELS OF SERVICE:  
EXISTING WITH PROJECT, MITIGATED**



SOURCE: Wilbur Smith Associates

# MISSION BAY SUBSEQUENT EIR

**FIGURE VI.2 (REVISED) WEEKDAY P.M. PEAK HOUR LEVELS OF SERVICE: YEAR 2015 CUMULATIVE, MITIGATED**



### ***Response***

Comments suggest that open space be relocated to Seawall Lot 337, where a shuttle staging location could be provided to lessen traffic congestion near the ballpark. Comments also suggest that restriping Third Street to provide an additional northbound lane in order to mitigate the unacceptable operation of the intersection of Third and Berry Streets (Measure E.2a) is not consistent with the plan for Third Street to which the Giants and DPT have agreed, and that the proposed widening of Third Street between King and Berry Streets (Measure E.21a) would require the elimination of the public plaza at the entrance to the Pacific Bell Ballpark.

Seawall Lot 337 is the Port parcel bounded by the China Basin Channel to the north, Mission Rock Street to the south, the San Francisco Bay to the east, and Third Street to the west. The comment recommends providing a shuttle staging area in an open space environment rather than the planned parking lot for approximately 3,000 vehicles to be built by the San Francisco Giants as part of the Pacific Bell Ballpark. Seawall Lot 337 is not part of the Mission Bay Project Area. Use of that site as temporary parking for games and events at the Pacific Bell Ballpark was analyzed in the *San Francisco Giants Ballpark at China Basin EIR*, certified in 1997. That EIR also included an alternative that did not provide parking in the Mission Bay South area; that alternative was rejected by the decision-makers who took action to approve the ballpark project. A lease for use of the Port's property by the Giants was approved by the San Francisco Board of Supervisors in September 1997 (see p. V.E.110 and note 102 on p. V.E.126 at the end of Section V.E, Transportation: Impacts). Therefore, the site would not be available for public open space use until expiration of this lease, at which time the Port Commission will decide what use to make of that site.

The San Francisco Department of Parking and Traffic, the Port of San Francisco, the San Francisco Giants, and Catellus Development Corporation and their consultants have met several times to discuss the future lane configuration on Third Street between Berry Street and the proposed Owens Street. In these discussions, it was pointed out that the drop-off lane to which the comment refers would not be available during ballpark events because of the barriers separating pedestrians from automobile traffic, and that Berry Street, between Third and Fourth Streets, could be used instead as a staging, pick-up and drop-off area. Traffic on Berry Street could be controlled so that only authorized vehicles have access, probably from Fourth Street. Berry Street will have one lane each way, and could be converted to one-way eastbound operation before and after ballpark events if so desired. Furthermore, on-street parking on the south side of Berry Street could be prohibited during ballpark event days and be used as additional staging area. Thus, Measure E.21a would not be inconsistent with the current plans for the configuration of Third Street on game-days.

The project features calling for widening Third Street between Berry and King Streets to provide an additional northbound lane would not reduce the plaza and sidewalk area adjacent to the Pacific Bell Ballpark. These features, listed as Measures E.1a and E.21a, would widen Third Street between Berry and King Streets on the *west* side of the street. This has been clarified in the SEIR text in the following edits:

On p. VI.9 the text of item E.1a has been revised to read:

**Widen the northbound approach to provide an additional through lane on the west side of Third Street.**

On p. VI.14 the text of item E.21a has been revised to read:

**Widen Third Street on the west side between Berry Street and King Street to accommodate the additional lanes described in Measure E.1.**

Mitigation Measures E.37 and E.40 identify additional widening measures for Third Street in this block; they would involve providing another additional lane by widening on the east side of the street. This additional lane would reduce the plaza and sidewalk area along the west edge of the ballpark block by about 2,800 square feet. The plazas planned at the northwest and southwest entrances to the ballpark would be smaller but would remain prominent features of the ballpark site. Decision-makers will consider the feasibility of these measures, including impacts on the ballpark site, when determining whether to adopt them as part of project approvals.

#### Transit Measures

##### MUNI

##### *Trolleybus Lines*

##### *Comments*

Table VI.8, page VI.74: 1990 FEIR E.11: Extension of the 47 line to Fourth and Townsend Streets and into Mission Bay South should be studied as an alternative or addition to the proposed 30/45/22 reroutings in the 1998 DSEIR, and should be studied as part of a comprehensive Muni service plan for South of Market and Mission Bay together. (*Richard Mlynarik*)

VI.17 Mitigation Measures - The staging discussion is not adequate. Only E.28a was discussed with us. Measure E.28c is not acceptable. Trolley coaches will not be removed from Potrero Hill. Measure E.28b would involve only very limited service to Mission Bay.



The Mitigation Measures should include:

- Temporary diesel shuttle service to Mission Bay along 16th Street could be implemented until line 22-Fillmore can be relocated.
- Temporary van service could be implemented by the University of California at San Francisco (UCSF) until transit demand justifies the provision of Muni services.

*(James D. Lowé, Transit Planner, San Francisco Municipal Railway)*

### **Response**

Comments suggest that the extension of the MUNI 47 Van Ness trolley bus line to Fourth and Townsend Streets and into Mission Bay South should be studied as an alternative or in addition to the proposed 30/45 and 22 route modifications. Comments also note that Mitigation Measure E.28c is not acceptable to MUNI, and that Measure E.28b would involve only very limited service to Mission Bay. Comments suggest that temporary diesel shuttle service to Mission Bay along 16th Street until the 22-Fillmore line could be relocated and temporary UCSF van service until transit demand justifies MUNI service should be mitigation measures.

Although the extension of the 47-Van Ness from its current terminus at Howard and Tenth Streets to Mission Bay South via Eighth and Ninth Streets was included in the prior Mission Bay Plan, MUNI has since dropped this idea from its overall transit plan for the City. This extension is not mentioned either in MUNI's most recent Short Range Transit Plan documents nor in its Capital Improvement Program documents. Moreover, the transit analysis conducted for the SEIR indicates that the additional service and capacity that would be provided by extending the 47-Van Ness to Mission Bay would not be required to accommodate overall project demand.

The text that describes the phasing of transit Measure E.28, a project feature, has been edited to reflect MUNI's comments. The following sentence has been added to the end of Measure E.28b:

**. . . , so that both Mission Bay and Lower Potrero areas continue to be served. This measure involves only limited service to Mission Bay; or**

Measure E.28c has been modified as follows:

**E.28c      If item E.28a is not feasible sufficiently early in project development, for an interim period until the necessary streets and trolley wires have been constructed as part of adjacent development, provide service to Mission Bay temporarily using diesel buses on 16th Street, or**

Catellus is currently planning to implement shuttle bus service that would connect Mission Bay with nearby regional transit stops until MUNI service is operating at a level that would accommodate the areas's local transit demand. UCSF currently operates a shuttle bus between campuses, and is expected to include the Mission Bay site in its operation. The UCSF service would not serve regional transit stops and would not serve non-UCSF travelers.

#### *Metro Extension of N-line*

##### ***Comment***

The discussion of the proposed N line extension as a mitigation on page VI.E.17 does not specifically indicate the amount of extra capacity required to serve MB demand. It only compares the extension of the N with adding an extra car to J consists and indicates that MUNI prefers the former. (*James D. Lowé, Transit Planner, San Francisco Municipal Railway [letter from Ken Rich, MUNI Third Street Light Rail, attachment to Mr. Lowé's letter]*)

##### ***Response***

The comment notes that the discussion of the proposed N line extension does not specifically indicate the amount of extra capacity required to serve Mission Bay demand.

Table VI.6 on p. VI.29 indicates that the expected average hourly passenger load during the p.m. peak hour in year 2015 would be about 4,000 passengers. While 1,400 of the 4,000 p.m. peak hour trips projected for MUNI Metro in the vicinity of Mission Bay at project build-out would be created by cumulative growth in the rest of San Francisco, 2,600 of these trips would be generated by the Mission Bay project. Thus, the Mission Bay project trips contribute about 65% of the total expected ridership for MUNI Metro service near Mission Bay at project build-out.

The SEIR notes that the mitigation measure which MUNI has found to be the most cost-effective to increase MUNI Metro capacity calls for extending N-Judah service from The Embarcadero station to the Mariposa/Third Street light rail station to serve the Mission Bay Area (Mitigation Measure E.45, p. VI.28). Approximately 65% of the additional capacity would be required to serve the ridership generated by Mission Bay.

#### Transportation Systems Management

##### ***Comments***

Also included in that I would like to see a subcommittee, maybe through the mayor's office, made up of Potrero Hill, Mission Creek, [SOMA] and South Beach citizens addressing these parking issues. (*Jeffrey Leibovitz*)



The DEIR suggests (page VI.29) that a Transportation Management Association (TMA) be created to implement a Transportation System Management Plan. The Subcommittee strongly supports this recommendation, but recommends that the name be "Transportation Management Committee", to more accurately reflect the open, public nature of the group that will be responsible for overseeing the implementation of the Transportation System Management Plan. The Subcommittee also recommends that representatives from adjacent neighborhoods, including Potrero Hill, Mission Creek, and SOMA/South Beach/Rincon Point, be invited to participate on the "Committee". . .

The transit elements suggested for inclusion in a Transportation System Management Plan, including the "Employee Transportation Subsidies" and "Transit Pass Sales" (pages VI.30-31), should be engaged in the development. Can the subsidy program for employees who use transit be required of employers in Mission Bay? What similar programs exist as requirements in the San Francisco Downtown (C-3-0) District? If the recommended TMA were created to manage the TSM programs, what funding sources might be utilized to pay for the suggested shuttle service? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

#### **Response**

Comments suggest that the Transportation Management Association (TMA) proposed to implement a Transportation Management Plan be alternatively named the Transportation Management Committee, and that representatives from adjacent neighborhoods be invited to participate in the group.

Comments also suggest that the employee transportation subsidies and transit pass sales noted as parts of the Transportation Management Plan be part of the project, request that participation in the subsidy program be required of Mission Bay employers, and request the identification of possible funding sources of the proposed shuttle service. Comments also request that a subcommittee of citizens of neighborhoods surrounding Mission Bay be created in order to address area parking issues.

Comments suggesting appropriate composition and name for the Transportation Management Association that would be created under Mitigation Measure E.46 are noted. If this mitigation measure is adopted, implementing details such as its name, composition, precise duties and powers, and leadership would be decided by decision-makers and the key agencies involved. Mitigation Measure E.46, on pp. VI.29-VI.30, has been modified to include a Transportation Coordinating Committee to address area-wide transportation planning issues, as follows:

**E.46    Transportation Management Organizations.    Applies to Mission Bay North and Mission Bay South.**

**E.46a       Form a Mission Bay Transportation Management Association (TMA) to implement a Transportation System Management (TSM) Plan.**

**E.46b       Form a Transportation Coordinating Committee (TCC) Establish-a  
~~coordinating committee~~ including representatives of Project Area property owners, UCSF, SFRA and appropriate city staff, including DPT, MUNI and DPW Applies to Mission-bay North and Mission Bay South, to**

**address area-wide transportation planning issues and coordinate with other uses and neighborhoods in nearby areas.**

**The Mission Bay TCC TMA would work closely with the San Francisco Giants concerning issues related to parking and traffic that would affect both Mission Bay employees, visitors, and residents, as well as ballpark patrons.**

The Transportation System Management Plan (TSM) in the SEIR (Mitigation Measure E.47) is designed to be flexible in response to changing conditions during and beyond project build-out. Therefore, the elements would not necessarily be mandatory, but would be considered by the Transportation Management Association for implementation as warranted. The transit subsidy program is one of many elements of the Mission Bay TSM Plan that is under consideration by Catellus. Many employers voluntarily adopt such programs because of the tax benefits available and the positive reaction of their employees. The cost of such programs is generally less than the cost of providing employee parking, and as a result there is an incentive for employers to encourage their employees to use transit.

In the C-3 Districts of Downtown San Francisco, developers of new land uses are required to provide and implement TSM plans pursuant to Section 163 of the City Planning Code. This requirement does not include a mandatory transit subsidy program.

The shuttle service is also a potential element of the Mission Bay TSM plan and is currently planned to be provided by Catellus for employees and residents, as long as gaps in transit services to and from the Project Area exist. The funding for the program would be the responsibility of Catellus. Catellus could pass this responsibility on to property owners and/or tenants in Mission Bay, but must assure that the TMA would have adequate funds to run the shuttle program.

***Comment***

The outline of the TSM Plan (page VI.30) suggests including as a possible element, "Pedestrian Signals at Owens Street near the Pedestrian Bridge". It is recognized that the proposed pedestrian bridge across China Basin Channel is not "assumed" in the plan for Mission Bay, but rather is a possible project component (pages VE.46-48). Consequently, perhaps it is the linkage between the pedestrian crossing of Channel and the "possible" bridge which relegates the Owens pedestrian signal to the category of "possible" project elements. (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

***Response***

The pedestrian signal at Owens Street near the Fifth Street pedestrian bridge is now proposed as part of the project, and it is assumed to occur regardless of the construction of the bridge. The signalized pedestrian crossing of Owens Street at Fifth Street is identified in p. VI.30 as a mitigation measure



(E.47d). Since the publication of the Draft SEIR, the project sponsor has revised the infrastructure plan to include this crossing as a required project element.

### **Variant 3A: Modified No Berry Street At-Grade Rail Crossing Variant**

#### Effect on Owens Street

##### ***Comments***

If the crossing of the Caltrain tracks is relocated and consolidated at Hooper, what will the impact be upon traffic volumes on Owens between the traffic circle and Fourth Street? . . .

If the grade crossing of the Caltrain tracks is relocated to Hooper Street and access to and from the residential neighborhood north of the Channel is provided via Hooper, will the forecast traffic volumes moving through the traffic circle increase? If so, has this possible change in traffic conditions been taken into consideration in the consideration and design of the traffic circle? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

##### ***Response***

Variant 3, No Berry Street At-Grade Rail Crossing, would not provide direct vehicular access to Seventh Street to the west from residential areas north of the Channel. Therefore, this variant would not add any measurable traffic to the roundabout at the intersection of The Common Streets with Owens Street that would lead to the at-grade rail crossing at The Common and Seventh Streets in Mission Bay South. The comments ask about potential traffic impacts at the roundabout intersection of The Common Streets with Owens Street if the Berry Street at-grade rail crossing were not provided as part of the project, as in Variant 3, and Berry Street were realigned to permit vehicles from Mission Bay North to travel to The Common Streets west of the Channel to cross the tracks at this proposed new crossing to Seventh Street. This realigned Berry Street proposal is described and analyzed in a new Variant 3A, provided in a response to comments in Variants under “Request for a Modified No Berry Street At-Grade Rail Crossing,” on pp. XII.467-XII.481.

The extension of Berry Street to intersect with The Common in Variant 3A is intended to provide additional egress routes from the westernmost portion of Mission Bay North. Vehicles would be able to travel south on Berry Street, and then turn right onto The Common to reach Seventh Street. The extension of Berry Street would not provide any better routes from Mission Bay South to areas outside the Project Area. Therefore, this modification of the No Berry Street At-Grade Rail Crossing Variant would not increase the volumes of traffic on the portion of Owens Street between the roundabout and Fourth Street.

Vehicles that choose to access the westernmost areas of Mission Bay North from the rail crossing at The Common in the Variant 3A Street configuration would not be able to make left turns directly from The Common to the extension of Berry Street. Providing vehicles with the ability to make this left turn would likely cause queues to build across the Caltrain tracks. In order to avoid such dangerous conditions, vehicles would be prohibited from making this left turn by a raised median within The Common, and would be required to travel around the roundabout, and make a right turn onto the extension of Berry Street from the west-bound portion of The Common. Because this route to access Mission Bay North from Seventh Street is circuitous, it would not be used as a primary entrance from Seventh Street. The additional amount of traffic that is expected to travel through the Mission Bay roundabout under Variant 3A during the p.m. peak hour is approximately 90 vehicles. This additional amount of traffic would not substantially impact the operation of the roundabout, which would operate below 50% of its maximum capacity under this variant.

### **Phasing of Infrastructure**

#### *Comments*

With further regard to the question of implementing mitigation measures which are required as conditions to the approval, it is stated on page VI.19:

"If these intersection mitigation measures were adopted as part of project approval, development proposed adjacent to the intersection would require that the mitigation measures be implemented regardless of whether the project p.m. peak hour vehicle trip threshold had been reached."

This is an essential element in the implementation of the project, as it pertains to the responsibility for implementing mitigation measures employing the "adjacency" principal. Regardless of the specific vehicle trip threshold existent at the time of a specific project development action, requiring the adjacent mitigation feature to be implemented in conjunction with the development is the only way to assure that they will be implemented in a timely manner, or at all. How, once a specific site is developed (the project constructed), would the developer of the site be coerced into funding and/or implementing an adjacent traffic improvement? Will these mitigation measures be assigned as conditions on individual building permits? It is important that the above statement be made part of the over-all project approval. . .

It is acknowledged that linking the development of the park space south of China Basin Channel to the development of the residential uses north of China Basin Channel is an unresolved matter. The Subcommittee strongly supports this linkage in order that the occupants of this residential development are provided with nearby open space. If this linkage is established as part of the project approval process, the accomplishment of the (initial) open space between Fourth and Fifth Streets would necessitate the closure and vacation of Channel Street (existing). This would, at a minimum, require the accomplishment of a temporary "Channel Street" in what would be the right-of-way of Owens Street (proposed). Mitigation E.25 (pages VI.14-15) does not address this improvement. Is this improvement under the assumption of a linkage between the park space development and



residential development? Would construction of a first full section of Owens Street (between Fourth and Fifth Streets) be a more appropriate response? (*Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee*)

The schedule of the construction of new transportation facilities will have major impacts on existing neighboring developments, including Pacific Bell Park. The SEIR anticipates that the development of transportation facilities will be triggered by an “adjacency” concept. This concept does not adequately account for the need to coordinate the phasing of transportation facilities in cooperation with affected property owners. Construction schedules should have the concurrence of the Giants so that construction activities do not conflict with the operation of the ballpark. (*John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants*)

### ***Response***

Comments request a clarification of the phasing of the construction of Owens Street, as it relates to the development of the open space areas south of China Basin Channel, and also request a description of the mechanism that would require the project sponsor to provide the transportation mitigation measures provided in the SEIR. Comments also suggest that the construction of transportation facilities should be coordinated with the San Francisco Giants so as not to conflict with the operation of the ballpark.

Under the proposed Mission Bay North Redevelopment Plan, the development of open space areas adjacent to the south side of the China Basin Channel would not be linked to the development of residential uses in Mission Bay North; thus, it is not expected that Channel Street would have to be closed, vacated, and relocated as part of Mission Bay North development. On the other hand, the Mission Bay South Plan calls for the development of the open space area on the south edge of the Channel between Third Street and Fourth Street, commensurate with the first Catellus building permit for Mission Bay South./26/ At that time, it would be necessary to close and vacate existing Channel Street and build an interim connection to Fourth Street, if that section of the proposed Owens Street has not already been built based on adjacency to new residences on the south side of Owens Street west of Fourth Street.

It is expected that the Mission Bay project would be developed in phases, each phase including one or several development blocks. Each project phase would include the infrastructure necessary to serve that part of the project including open space, as described under “Phasing of Construction Infrastructure and Improvements in the Project Area” on pp. III.34-III.38. Project features and the mitigation measures and infrastructure triggered under the “adjacency” principle would be required by the Owner Participation Agreements with the Redevelopment Agency. Also, as part of the subdivision approvals, the project sponsor would be required to execute a subdivision improvement

agreement that includes the provision of security covering the infrastructure that must be built in that phase.

As stated at the beginning of this response, development of open space adjacent to the south edge of the Channel would not be linked to development of residential uses in Mission Bay North. However, if the Mission Bay North Redevelopment Plan were ever revised to call for developing the South Channel Park at the same time as residential buildings were constructed north of the Channel, then either some type of temporary access road would be needed for houseboat residents and visitors, or construction of Owens Street between Fourth Street and The Common roundabout would need to be linked to South of Channel Park development.

The Ballpark Transportation Coordination Committee (BTCC) is responsible for developing plans and measures to assure the coordination of construction of the Ballpark with other construction activity in the vicinity, such as the seismic retrofitting of the Lefty O'Doul and the Peter Maloney bridges, the Third Street Light Rail Project, and the development of specific parcels of the Mission Bay Project. Catellus is a member of the BTCC.

### **Interim Conditions**

#### ***Comments***

Neither does the SEIR account for the 3,400 parking spaces that will be lost under I-80 during the 5-year Caltrans re-construction of the Bay Bridge which begins in 1999 (and which coincides with the opening of PacBell Park and the first stages of the Mission Bay development). These dramatic environmental traffic and other impacts must be quantified and analyzed. (*Rick Mariano, Chairman, Rincon Point - South Beach Citizens Advisory Committee*)

The traffic analysis for the project has not taken into consideration the impacts of the proposed Caltrans work on the San Francisco-Oakland Bay Bridge. During the period of the traffic analysis (1999-2009) Caltrans will be replacing the eastern portion of the Bay Bridge and significantly retrofitting the western portion from 5th Street to the western anchorage. This work will have significant impacts upon traffic patterns. There will be an elimination of 5,000 parking spaces which presently exist in the western anchorage area. There is a significant potential for impacts from this work affecting traffic in the area of the project and on Bay Bridge traffic. Caltrans has yet to develop a traffic mitigation plan to address the issues raised by its proposed work. AC Transit believes that substantial, additional bus service to the Transbay Transit Terminal is a potential method for addressing these impacts. To fully evaluate the traffic impacts of the project and to devise appropriate mitigation measures, the analysis cannot ignore the proposed Caltrans work. (*Kenneth C. Scheidig, General Counsel, Alameda-Contra Costa County Transit District*)

It is the Subcommittee's understanding that it is probable that UCSF Phase I building development will occur on a parcel fronting on 16th Street (existing), bounded on the east by the future right-of-



way of Fourth Street (proposed), and bounded on the west by the diagonal right-of-way of Owens Street (proposed). Such development would require the closure and vacation of Sixth Street (existing), which will mean the loss of a roadway connection between 16th Street and existing commercial and residential uses north of this location (to China Basin Channel). It is assumed that both the "Kirk Paper" building and the golf driving range will outlast this initial UCSF development. This development scenario would therefore require the improvement of a portion of Owens Street, north of 16th Street, and a temporary street connecting this Owens section with the north section of Sixth Street (existing). Is this understanding of the probable development assumptions and scenario accurate and is the suggested street construction (mitigation) appropriate?

UCSF Phase I development of the parcel aforementioned (in item # 8.a) and on other adjacent parcels will presumably require interim surface parking to be developed north of these parcels. The explanation of the development of Fourth Street (E.23, page VI.14) makes no mention of the possible improvement of 1-2 blocks of Fourth Street north of 16th Street to provide access to the (assumed) surface parking. Is this development scenario accurate, in regard to surface parking concomitant to the UCSF development, and would the Fourth Street improvement be a necessary investment?  
(Barbara L. Westree, Chair, Transportation Subcommittee, Mission Bay Citizens Advisory Committee)

#### **Response**

Comments inquire about the potential impacts of the upcoming seismic retrofitting of the San Francisco-Oakland Bay Bridge on the Mission Bay Project Area. Comments also request information regarding the street configuration after the first phase of the UCSF site is built. Responses reflect current interim conditions plans, which are subject to change.

The retrofitting of the San Francisco-Oakland Bay Bridge will cause some displacement of parking outside of the Mission Bay area, near the west anchorage of the Bay Bridge, between 1999 and 2004. The first sentence under "Interim Conditions During Buildout Period," on p. V.E.115 has been changed and a new endnote has been added, as follows:

**Seismic retrofit of the San Francisco-Oakland Bay Bridge approaches is planned by Caltrans for the period from about 1999 to ~~2003~~ 2004. /105a/**

The following new endnote has been added as Endnote 105a on p. V.E.127:

**105a. Arvind Joshi, Caltrans, telephone conversation with Wilbur Smith Associates, August 14, 1998.**

The vehicles displaced by the retrofit may seek parking within Mission Bay. Since Mission Bay would not be fully developed by 2004, it may be possible to allocate some areas as temporary parking lots if sufficient demand exists. In addition, the Port of San Francisco site immediately south of China Basin Channel and east of Third Street is planned as a 2,000-space parking lot leased to the

San Francisco Giants. The lot could be used for commuter parking on non-event days if the permitted use of the lot were changed by an amendment of the Zoning Administrator's determination dated September 4, 1997, as discussed on p. V.E.115.

On the other hand, parking for the Mission Bay development is expected to be priced and managed so as to discourage non-Mission Bay employees, residents, or visitors from parking. Because most of the parking provided in Mission Bay would be off-street parking, Mission Bay tenants would have greater control of the parking facilities intended to serve them. The Mission Bay project is not anticipated to generate any additional parking demand in the area that would be impacted by the retrofitting of the Bay Bridge, as this area is approximately one-half mile from the Mission Bay North area. Although Caltrans is not required to mitigate the temporary parking deficit created by the retrofit work, Caltrans is negotiating with the San Francisco Department of Parking and Traffic to develop a plan that will reduce traffic and parking impacts of the construction work./27/

In the absence of knowledge about such plans, and because it is very difficult to predict what travel behavior changes people will make under such dramatically different transportation conditions, and because the rate of Mission Bay buildout is unknown, it is not possible to quantify effects of the Bay Bridge retrofit project.

The comment is correct in assuming that during the Phase I plan for the UCSF site, the southern section of Sixth Street would be vacated and closed, and an interim street would be built connecting the north section of Sixth Street to Owens Street. Measure E.24, a project feature described on p. VI.14 in the SEIR, refers to the ultimate configuration of Fourth Street. Under the current UCSF Preliminary Development Plan, during Phase I, approximately 800 feet of Fourth Street, north of 16th Street, would be improved to its ultimate configuration to provide access to the UCSF surface parking lots./28/

The discussion of "Interim Conditions During Buildout Period" in Section V.E, Transportation, has been expanded to add the following text as the second sentence in the first paragraph on p. V.E.115:

**Under the UCSF Preliminary April 1998 Development Plan, during Phase I about 800 feet of Fourth Street would be improved, north of 16th Street, to its ultimate configuration to provide access to the first three structures and interim UCSF surface parking lots.**



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NOTES: Transportation

1. Donald Miller, Hawk Engineers, Inc. letter to Eric Harrison and David Knadle, Catellus Development Corporation, July 2, 1998.
2. The required grades would be about 9%, while the recommended grades by Caltrans or the American Association of State Highway and Transportation Officials (AASHTO) area between 3 and 6%.
3. Donald Miller, Hawk Engineers, Inc. telephone conversation with Wilbur Smith Associates, August 7, 1998.
4. San Francisco Public Utilities Commission, *Muni Metro East Project, Phase I Design, 16th Street Crossing Alternative Report*, prepared by Parsons Brinckerhoff Quade and Douglas, Inc., December 23, 1991.\*
5. Donald Miller, Hawk Engineers, Inc., letter to Eric Harrison and David Knadle, Catellus Development Corporation, July 2, 1998.
6. Jack Fleck, Traffic Engineer, San Francisco Department of Parking and Traffic, personal communication with Wilbur Smith Associates, August 6, 1998.
7. Gerald T. Haugh, Executive Director, Caltrain, Memo to Peninsula Corridor Joint Powers Board, July 29, 1998.
8. Peter Straus, Director of Service Planning, San Francisco Municipal Railway, telephone conversation with Wilbur Smith Associates, June 24, 1998.
9. Peter Straus, Director of Service Planning, San Francisco Municipal Railway, telephone conversation with Wilbur Smith Associates, June 24, 1998.
10. Based on projected Interim Operating Segment p.m. peak period total ridership of 2,931 passengers, with 1,742 of those passengers being generated by Mission Bay.
11. Assumes 60% of the p.m. peak period load occurs in the p.m. peak hour, and a cumulative growth of 40%, which is based on projections of the revised MTC Model.
12. *BART Short Range Transit Plan*, 1997-2006, p. 3-10.\*
13. State of California, Department of Transportation, *Project Plans for Construction on State Highway in the City and County of San Francisco at Various Locations from 0.1 Mile South of 23rd Street to Brannan Street*, August 1, 1994. Drawings Railroad Construction No. 5 and "A" Line Bent Elevations No. 1.\*
14. Peninsula Corridor Joint Powers Board, *Caltrain 20-Year Strategic Plan, FY 1997/98 to 2016/17*, October 1997.\*
15. Diane Oshima, Senior Planner, Port of San Francisco, telephone conversation with EIP Associates, August 10, 1998.

16. Wilbur Smith Associates, letter report to Paul Newman, San Francisco Parking Association, February 11, 1992. See also *Yerba Buena Center Final Subsequent EIR*, Planning Department File No. 91.355E, certified December 3, 1992, pp. 114-115.
17. San Francisco Planning Department, *Citywide Travel Behavior Survey 1993, Summary Findings Phase I*, page 3.\*
18. San Francisco Planning Department and Federal Transit Administration, *Third Street Light Rail Project DEIS/DEIR*, Planning Department Case File No. 96.281E, State Clearinghouse No. 96102097, April 3, 1998, p. 2-30.
19. Eric Harrison, Project Manager, Catellus Development Corporation, personal communication with Wilbur Smith Associates, August 5, 1998.
20. Donald Miller, Hawk Engineers, Inc., personal communication with Wilbur Smith Associates, June 25, 1998.
21. *Roundabout Design Guidelines*, Ourston & Doctors, September 1995, pp. 15 and 48.\*
22. Peter Straus, Director of Service Planning, San Francisco Municipal Railway, telephone conversation with Wilbur Smith Associates, August 13, 1998.
23. San Francisco Redevelopment Agency, *Mission Bay Design Standards and Guidelines*, Draft C, March 31, 1998, "Open Space Guidelines," pp. 78-79. See also p. V.E.102, noting the 10-foot wide sidewalks for Mariposa Street, and p. III.28 under "Setbacks," noting that the setback would be in addition to specified sidewalk widths.
24. Donald Miller, Hawk Engineers, Inc., personal communication with Wilbur Smith Associates, June 25, 1998.
25. San Francisco Planning Department and Federal Transit Administration, *Third Street Light Rail Project DEIS/DEIR*, Planning Department Case File No. 96.281E, State Clearinghouse No. 96102097, April 3, 1998, pp. 2-8 - 2-12.
26. John Barkey, Director, Financial Planning, Catellus Development Corporation, personal communication with Wilbur Smith Associates, June 25, 1998.
27. Arvind Joshi, Caltrans, and Jack Fleck, Traffic Engineer, San Francisco Department of Parking and Traffic, telephone conversations with Wilbur Smith Associates, July 14, 1998.
28. Catellus Development Corporation, *Response to UCSF Preliminary Campus Development Plan: Mission Bay Campus Master Plan, April 1, 1998*, August 18, 1998.\*

\* A copy of this report is on file for public review at the Office of Environmental Review, Planning Department, 1660 Mission Street, San Francisco.



## AIR QUALITY

### *Comment*

We are particularly concerned about pre-development conditions, when there is a significant level of blowing dust from uncovered surfaces. Dust monitoring stations need to be located to address the impact on residents of Mission Creek and other adjacent neighbors. (*Corinne W. Woods, Toxics Subcommittee Chair, Mission Bay Citizens Advisory Committee*)

### *Response*

Existing fugitive dust emissions are regulated by the Bay Area Air Quality Management District (BAAQMD). Regulation 6-305 is intended to prohibit visible particles from annoying off-site individuals. Before development, this regulation would govern control of dust emissions in the Project Area. If studies called for in pre-development Measure J.1b show unacceptable levels of contamination in soils in some parts of the Project Area with existing exposed soils, dust control measures would be implemented as part of Measure J.1c (pp. VI.42-VI.43). As is the case throughout the region covered by the BAAQMD, persons wishing to report dust or other air quality problems should call the District's complaint number as listed in the telephone book.

## NOISE AND VIBRATION

### *Comment*

Please review statements regarding the length of time involved with bridge openings (five minutes) under Bascule Bridges (Third and Fourth Streets) on page V.G.6 and the length of time for openings (two to three minutes) under Bascule Bridge Openings on page V.G.22. The two statements appear inconsistent. (*W.R. Till, Chief, Bridge Section, U.S. Coast Guard*)

### *Response*

The comment raises a consistency concern about the description of the length of time involved with bridge openings.

The apparent discrepancy between the two descriptions is largely due to the different sources of the descriptions. The first is derived from information on operation collected by the bridge staff. The second description comes from field data collected during noise monitoring for the SEIR. The variation in the description of the length of time is due to the nature of the openings. Page V.G.6 described the average time associated with opening the bridge, allowing boats to pass through, and closing. Page V.G.22 described the length of time associated with the physical operation of opening the bridge when it was tested for noise, without any boat passage.

For clarity, the second-to-last sentence under "Bascule Bridge Openings" on p. V.G.22 has been modified as follows:

**Finally, the duration of the siren is very short and the total time for bridge openings is about ~~two to three~~ five minutes.**



## SEISMICITY

### *Comment*

The SEIR is a document that should be read from back to front by reviewers and concerned citizens; especially is this true of V.H. 1-24 and V.I. 1-45 in Vol. I (Seismicity and Health and Safety). I would not live in Mission Bay housing under any circumstances, nor in any other unstable area in San Francisco. For estimated frequency of earthquakes see Vol. III, G.1, second paragraph, especially lines 8-10. (*Doris Ostrander Dawdy*)

### *Response*

As stated on p. V.H.11 of Section V.H, Seismicity, the Mission Bay Area is expected to be subjected to at least one major earthquake during the lifetime of the proposed project. Anticipated groundshaking intensities would be as high as VIII or IX on the Modified Mercalli Intensity Scale (very strong to violent on the old San Francisco Scale). To account for earthquake-related hazards, the construction regulations under which Mission Bay would be developed (described on pp. V.H.6-V.H.10) encompass the most stringent state and city building codes and seismic hazard zone requirements applied to development in San Francisco. The current 1995 San Francisco Building Code contains specific standards for structures in areas of San Francisco that are subject to failures from seismically induced groundshaking (structural damage, liquefaction, settlement). The summary tables (Tables VI.7 and VI.8) in Chapter VI, Mitigation Measures (specifically on pp. VI.63 and VI.64, and VI.87-VI.94 of the SEIR) indicate that the great majority of the concerns expressed about the seismic safety of the Project Area are now addressed by the Building Code or have been addressed by specific measures for emergency preparedness and emergency response to seismic conditions identified in Chapter VI, Mitigation Measures: Seismicity, on pp. VI.37 and VI.38. Thus, the 67% probability of a major earthquake affecting the Bay Area prior to the year 2020 (as indicated in the Seismicity Appendix, p. G.1) has formed a substantial component of project planning by the City, the Redevelopment Agency, and Catellus Development Corporation, and appropriate steps have been taken to regulate and design project structures to respond to seismic safety issues.

### *Comment*

I did not have time to review Vol. II. Shortcomings of the SEIR from my limited perusal are the absence of geologic seismic maps which can be obtained from the U.S. Geological Survey, and the huge expenditure of money for a 3-volume project report that might be better spent by our water department for safer water. (*Doris Ostrander Dawdy*)

### *Response*

The geologic, soils, and seismic conditions of the Project Area have not changed since publication of the 1990 Mission Bay FEIR. Issues related to geology and soils were covered adequately in that document and the information is summarized on pp. A.48-A.54 of the Initial Study of this SEIR.

Throughout the discussion the reader is referred to Section VI.K, Geology and Seismicity, of the 1990 FEIR, which has well-developed and informative geologic and seismic maps that still are reliable; some details are updated in the SEIR to reflect new information. These maps form part of the SEIR document by reference. Consequently, it was not necessary to reproduce them in the SEIR.

SEIR Figure V.H.1, Regional Geologic Map, and Figure V.H.2, State of California Seismic Hazard Zone, on pp. V.H.2 and V.H.8, respectively, contain the most current available geologic and seismic information from the United States Geological Survey (1994) and the California Division of Mines and Geology (1994, 1997) for regional and local geologic and seismic conditions in the San Francisco Bay area. Site-specific conditions, described in "Project Area Characteristics" on pp. V.H.5-V.H.6, and "Groundshaking," "Liquefaction," and "Exposure of Concentrated Populations to Seismic Hazards" on pp. V.H.11-V.H.13, are based on information from current and previous geotechnical investigations of the Project Area, information provided by the geotechnical and project engineers, and geotechnical investigations for nearby sites, as stated in Endnote 14 on p. V.H.21, and cited in Endnotes 15 through 17, and 30 through 35 on pp. V.H.21-V.H.23.



## HEALTH AND SAFETY

### Hazardous Chemical and Radioactive Waste

#### *Comments*

I want some assurances that they will not be producing hazardous wastes from biotech research or radioactive wastes and other pollution associated with other usage. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

Since UCSF is exempt from local planning and zoning rules, I want assurances that they will not be producing hazardous or radioactive wastes and pollution from any research and that the City will have control over issues associated with any research there. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

#### *Response*

Under “Estimated Hazardous Materials Quantities” on pp. V.I.17-V.I.22 of Section V.I, Health and Safety, the SEIR indicates that UCSF and some Commercial Industrial facilities would generate hazardous wastes as an unavoidable consequence of their Mission Bay operations. The use of hazardous materials would be critical to the pursuit of research and development goals; generation of hazardous wastes is a consequence of using hazardous materials. Commercial, retail, public, and residential uses would also generate hazardous wastes to various degrees, noted under “Types of Hazardous Materials Users” on p. V.I.10. Impacts associated with hazardous wastes generated within the Project Area by project residents, small businesses, Commercial Industrial facilities, and UCSF are discussed under “Residents and Similar Waste Generators” and “Larger Waste Generators” on pp. V.I.31-V.I.35.

Under “Hazard Assessment” on pp. V.I.26-V.I.27, the SEIR acknowledges that waste disposal would be one potential means of environmental exposure to hazardous materials. However, as indicated in Table V.I.8 on p. V.I.28, this potential impact would be mitigated by training workers, segregating wastes, collecting wastes for appropriate disposal, monitoring wastewater to the extent feasible, diluting and treating sewage from the site, checking loads at the San Francisco solid waste transfer station, labeling trash cans, and following federal and state hazardous waste disposal regulations and procedures, including those for hazardous waste manifest documentation. Appendix H, Health and Safety, provides additional information regarding routine waste disposal under “Routine Operations” on p. H.28 and unintentional waste disposal under “Upset Conditions” on pp. H.30-H.31.

The SEIR describes hazardous waste regulations and oversight in Table V.I.2 on pp. V.I.4-V.I.5 and in Appendix H under “Regulatory Setting” (pp. H.13-H.16). As stated in the SEIR, San Francisco

oversees some aspects of hazardous waste generation and disposal within the City through the San Francisco Hazardous Materials Permit and Disclosure Ordinance. The San Francisco Department of Public Health is the Certified Unified Program Agency for the City and is therefore responsible for implementing portions of the City's ordinance and many state-mandated hazardous waste management requirements.

The authority to oversee many state requirements has been delegated to the San Francisco Department of Public Health by the California Department of Toxic Substances Control. This authority extends to state institutions such as UCSF. As stated in Table V.I.2 on p. V.I.5 and in Appendix H on p. H.17, regulatory oversight of radioactive materials use and waste generation and disposal, whether by UCSF or a Commercial Industrial facility, would fall within the jurisdiction of the Radiologic Health Branch of the California Department of Health Services.

Although the project would contribute to cumulative increases in hazardous waste generation within and beyond San Francisco (discussed under "Hazardous Waste Disposal" on pp. V.I.40-V.I.41), the San Francisco Hazardous Waste Management Program is currently working to reduce the volume of hazardous waste generated in San Francisco. At the same time, the San Francisco Department of Public Health enforces requirements for hazardous waste minimization, a form of pollution prevention, as set forth in the San Francisco Hazardous Materials Permit and Disclosure Ordinance and state law.

### **Animal Testing**

#### ***Comment***

I'm also opposed to animal testing and research, and I want to have these assurances that the City will have some control over these issues. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

#### ***Response***

Under "Biohazardous Materials and Animals" on pp. V.I.20-V.I.22, the SEIR acknowledges that the use of animals for research and product development purposes would be a foreseeable outcome of the project. As stated in Table V.I.3 on p. V.I.14, the use of research animals is sometimes required to study biological effects that cannot be adequately evaluated through other techniques, or to produce biological products necessary for research, development, or manufacturing. The U.S. Food and Drug Administration requires that experimental drugs be tested on animals prior to conducting studies on humans. Under "Enforcement of Guidelines for Work Involving Biohazardous Materials and Animals" on pp. V.I.27-V.I.29, the SEIR addresses the potential environmental effects of animal use,



and Appendix H, Health and Safety, provides additional information and analysis relating to the routine and accidental exposure of workers (local effects) to animal-related hazards (pp. H.24-H.26) and the routine and accidental exposure of the larger community (off-site environment within and outside the Project Area) to animal-related hazards (pp. H.27-H.32).

In Table V.I.2 on p. V.I.5 and Appendix H on pp. H.17-H.21 (under “Biological Safety” and “Standard Industry Practices”), the SEIR summarizes requirements for the care and use of research animals. In addition to implementing Animal Welfare Act requirements, standard industry practices include complying with the National Research Council’s *Guide for the Care and Use of Laboratory Animals*.<sup>/1/</sup> These guidelines relate to institutional policies and responsibilities, monitoring of animal care and use, veterinary care, training and qualifications of personnel, occupational health and safety, housing and husbandry, procurement and transportation, surgical procedures, pain and anesthesia, and euthanasia. As stated on p. V.I.27, no regulatory body requires businesses in San Francisco to follow such guidance unless the business receives funding from the federal government. For this reason, the SEIR identifies Mitigation Measure I.1 on p. VI.40 to ensure compliance with the *Guide for the Care and Use of Laboratory Animals* or its successor documents. Mitigation Measure I.1 would also require businesses and institutions to comply with guidelines set forth in *Biosafety in Microbiological and Biomedical Laboratories* and *Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)*, or their successors.<sup>/2/</sup> These documents also relate, in part, to the use of animals for study purposes. As indicated under “Enforcement of Guidelines for Work Involving Biohazardous Materials and Animals” on p. V.I.27, UCSF accepts federal funding and therefore, as a matter of institutional policy, adheres to applicable guidelines related to the use of research animals. See the response in Project Description, “Constitutional Exemption” on p. XII.27 for a discussion of UCSF’s constitutional exemption from local regulation.

### Characterization of Biohazardous Agents Risk Groups

#### *Comment*

Vol. III, H. 6-11. Risk Group 2 on p. H.6 lists “Agents that are associated with human disease which is rarely serious and for which preventive or therapeutic interventions are *often* available.” The term “rarely serious” is ill-advised. The parasite, *Cryptosporidium parvum*, invaded Milwaukee’s drinking water plant in 1993. Sixty-nine deaths and some 400,000 illnesses, many requiring hospitalization, were attributed to *Cryptosporidium* in Milwaukee’s drinking water. Under Bacterial Agents are two that are frequently mentioned in the press as causing death or serious illness with long term recoveries: *Escherichia coli* (E. coli 0157:H7) which caused several recent deaths, and *Campylobacter coli*. (*Doris Ostrander Dawdy*)

**Response**

The comment questions the reasonableness of defining certain infectious agents listed in Appendix H, Table H.2 (p. H.6), as “agents that are associated with human disease which is rarely serious and for which preventative or therapeutic interventions are often available.” This language (and all of Table H.2) is derived from the U.S. Department of Health and Human Services National Institutes of Health’s *Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)*.<sup>13/</sup> The National Institutes of Health is a national authority on agents that are infectious to humans. The *NIH Guidelines* have been revised and updated several times over the years to reflect the best available scientific consensus. The most recent revision occurred in 1996.

The comment’s examples of illnesses caused by *Cryptosporidium*, *Escherichia coli*, and *Campylobacter coli* do not relate to the use of these organisms in research or development applications. Numerous domestic and wild animals are reservoirs for *Campylobacter coli*, and *Cryptosporidium* is found in all surface waters and the feces of infected animals. Similarly, many strains of *Escherichia coli* occur naturally within the human gastrointestinal tract. These organisms have caused illnesses through exposure to contaminated water and food. For example, various news stories have reported *Escherichia coli* contamination of undercooked meat and inadequately treated swimming pools. The *Escherichia coli* strain most commonly used for research and development purposes is *Escherichia coli* K12, which, through mutations, has lost the ability to survive in humans.

As indicated in Appendix H, Tables H.4 and H.5 (pp. H.20 and H.21), standard practices for handling infectious agents, including those that would not be considered biohazardous, include decontaminating all wastes (see the response in Hydrology and Water Quality regarding “Water Discharges from Research and Development Activities” on pp. XII.361-XII.367). UCSF has adopted these industry standards and, for the reasons identified under “Enforcement of Guidelines for Work Involving Biohazardous Materials and Animals” on pp. V.I.27-V.I.29, their implementation would be required of Commercial Industrial facilities by Mitigation Measure I.1 (p. VI.40). Therefore, none of the agents listed in Table H.2 would be released to the environment under normal circumstances. As demonstrated by the hazard assessment provided in Appendix H (pp. H.19-H.32), research and development activities in the Project Area would not provide any reasonable exposure pathways through which these organisms could enter food or water supplies. Wastewater from the Project Area (which would not normally contain infectious agents used in research or development) would not be used as a source of drinking water. Beaches are posted whenever a combined sewer overflows occurs to avoid any potential health hazards of water contact recreation. For the reasons discussed above, the project would not affect any existing human health risks posed by these organisms.



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NOTES: Health and Safety

1. National Research Council, *Guide for the Care and Use of Laboratory Animals*, 1996.
2.
  - a) U.S. Department of Health and Human Services Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, *Biosafety in Microbiological and Biomedical Laboratories*, 3rd ed., May 1993.
  - b) U.S. Department of Health and Human Services, National Institutes of Health, *Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)*, January 1996.
3. U.S. Department of Health and Human Services, National Institutes of Health, *Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)*, January 1996, Appendix B.

## CONTAMINATED SOILS AND GROUNDWATER

### General

#### *Comments*

The toxics subcommittee retained a consultant, Dr. Martha Kohler, to review the sections of the Draft report relating to soil and groundwater contamination, as well as the technical studies and other source documents from the Regional Water Quality Control Board and Catellus Development Corporation.

Her report concluded that soil and groundwater investigations are adequate to determine the nature and extent of toxic contamination in the project area.

And the findings support the conclusion of the Regional Water Quality Control Board that the presence of residual chemicals in soil and groundwater do not pose an unacceptable risk to water quality, public health and the environment, provided the following conditions are met:

One, risk management plans for long-term operations acceptable to the Regional Board are submitted and approved that describe specific methods and procedures for managing soil before, during, and following site construction.

Health and safety plans for construction are submitted to and approved by the regional board.

Enforceable institutional mechanisms or deed restrictions restricting the owner or operator parcel usage to uses appropriate for the human health risks calculations conducted. Which means that you can't have any contact with native soils, no gardens, and that there is underground utility control so that workers aren't exposed to it.

These have to be submitted to and approved by the Regional Board.

The Pier 64 free product area. Pollution from former oil distribution facilities has to be investigated and remediated, if necessary, by the responsible parties.

The project needs also to fully comply with City and County requirements, such as the Maher Ordinance, which requires soil sampling and analysis and permanent approval conditions on any project that disturbs at least 50 cubic yards of soil.

Our consultant also found that the tidal influence study and the tidal influence model support the attenuation theory that metal concentrations in groundwater meet water quality standards when they get to Mission Creek or the Bay.

The technical documents support the conclusions that the near shore aquatic community is not at risk from volatile organic compounds or petroleum hydrocarbons found as chemicals of potential ecological concern in groundwater.

Technical memorandum No. 1 gives an outline of the risk management plans that will be submitted to the Regional Board. The risk management plans are critical in ensuring the potential effects on



human health in the environment are adequately addressed. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### **Response**

It is acknowledged that the Mission Bay Citizens Advisory Committee Toxics Subcommittee's independent consultant has reviewed and agrees with the background soil and groundwater investigations on which the SEIR is based. The comment is an accurate restatement of some of the main issues and results presented in the Contaminated Soils and Groundwater sections of the SEIR.

### **Comments**

The Redevelopment Agency, the planning department, and Catellus Corporation should make every effort to ensure that development will not become another Bayview/Hunter's Point with the highest cancer rates in San Francisco by neighborhood.

No stone should be left unturned in every effort to clean up contaminated soil and groundwater in this development. (*Victoria Winston, Bay Area Organizing Committee and St. Dominic's Parish*)

We need to go further in terms of toxic cleanup and remediation. (*Jon Rainwater, San Francisco League of Conservation Voters*)

### **Response**

The Risk Management Plan or Plans described in Section V.J, Contaminated Soils and Groundwater: Setting and Impacts, on pp. V.J.61-V.J.67, V.J.70-V.J.72, V.J.74-V.J.76, and V.J.85, and in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, on pp. VI.41-VI.45, is proposed to be included in the project. As stated in Regional Water Quality Control Board Resolution No. 98-044, adopted on May 20, 1998, there is no requirement at this time to carry out further cleanup of chemicals in soils or groundwater in the Project Area, except for the petroleum free product plume that will be remediated separately from the Mission Bay development (see pp. V.J.58-V.J.59 for a discussion of the regulatory status of the free product area). The RWQCB found that conditions at the site do not pose unacceptable risks to water quality, public health, and the environment, and can be managed through operating and institutional controls that will be part of the project.

## **Regulatory Requirements**

### **Comment**

Pages V.J.93 and V.J.94, Table V.J.2. Potential Environmental Effects and Site Controls Associated with Remediation Techniques. It would be useful for the Subsequent EIR to identify specific statutes, regulations or ordinances which actions must comply with. For example:

- Excavation and Treatment and/or Off-Site Disposal. There are permitting requirements for treatment of hazardous wastes, including soils which are excavated and require treatment prior to disposal.

- Temporary Stockpiling. If hazardous waste is generated and stockpiled, the stockpile must, in addition to the criteria outlined in the Subsequent EIR, comply with the requirements of California Code of Regulations, Title 22, Division 4.5 and Health and Safety Code, Division 20, Chapter 6.5.

*(Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch,  
Department of Toxic Substances Control, California Environmental Protection Agency)*

### **Response**

The table referred to in the comment, Table V.J.2, provides a brief summary of possible environmental effects of various remediation techniques and the types of controls generally used to reduce these effects; it was intended to provide information about environmental impacts rather than to direct readers to the applicable laws and regulations. As discussed on p. V.J.92, the need for remediation within the Project Area has not been identified, except for the petroleum free product area. The Regional Water Quality Control Board (RWQCB) has agreed that chemicals in the soil and groundwater in the Project Area do not require cleanup at this time (in Resolution No. 98-044, adopted on May 20, 1998). The evaluation of potential effects of remediation was included in the impact analysis on pp. V.J.91-V.J.95 to recognize that there could be changes in circumstances or conditions that could affect the project-related impacts. If remediation were found to be necessary in particular locations in the Project Area based on more detailed information to be obtained as part of individual site development, the specific statute or regulation that would apply to a particular remedial action would depend on the nature of the remedial activity. While the SEIR does describe potentially applicable laws and identifies agencies with primary jurisdiction, it is not necessary to cite all potentially applicable laws and regulations in an EIR; legal requirements would apply whether or not they are specifically noted in the document. As noted in the first full paragraph on p. V.J.59, the impact analyses provided in Section V.J, Contaminated Soils and Groundwater, assume substantial compliance with applicable laws and regulations.

Regulatory requirements pertaining to the management of hazardous wastes in soil are identified in "Hazardous Wastes in Soil" and other Regulatory Framework subsections on pp. V.J.50-V.J.55. The various laws and regulations summarized on those pages and their applicability during the site development process, including situations in which remediation may be necessary, are also noted. The discussion focuses on statutes, regulations, and ordinances that would apply during routine site development activities because, with the exception of the free product area, the need for remedial action in the Project Area has not been identified. The various regulatory summaries presented on pp. V.J.50-V.J.55 acknowledge that the need for soil remedial action may be identified during the site development process. The state laws and regulations and local ordinances (e.g., Article 20) that are described would be implemented, as appropriate, during any remedial actions, including, but not limited to, those in which excavation, treatment, or off-site disposal or temporary stockpiling may be



necessary. Agencies with regulatory jurisdiction related to chemicals in soil and groundwater are also noted in the "Approvals Required" subsection of Chapter III, Project Description, particularly on p. III.51.

The following sentence has been added after the first sentence of the last paragraph on p. V.J.50 to provide citation to the specific regulations related to hazardous wastes in soils noted in the comment:

**At the state level, the Cal/EPA Department of Toxic Substances Control administers hazardous waste laws and regulations pursuant to Division 20, Chapter 6.5 of the California Health and Safety Code and Title 22 of the California Code of Regulations, respectively.**

As explained on p. V.J.75, the California EPA Department of Toxic Substances Control (DTSC) has determined that soils excavated during construction in the Project Area can be moved around and reused in the Project Area without triggering hazardous waste management requirements, providing the actions are conducted in accordance with a Risk Management Plan. That determination was formalized in a letter from DTSC to the Regional Water Quality Control Board (RWQCB) in December 1997. In the event removal of soil and transport for offsite disposal or treatment is determined to be necessary (e.g., as a result of either testing or remediation carried out pursuant to Article 20 of the San Francisco Public Works Code), additional regulations would apply, as discussed on p. V.J.54.

The following sentences have been added after the first sentence of the second full paragraph on p. V.J.95 to acknowledge that various laws and regulations would apply to remediation and would be implemented as appropriate.

**Remedial activities would be subject to various laws and regulations. Depending on the remedial action being undertaken, these statutes and regulations would include, but would not be limited to, hazardous waste management laws and regulations administered by the DTSC, water quality protection laws and regulations under the jurisdiction of the SWRCB and RWQCB, air quality management regulations administered by the BAAQMD, OSHA workplace safety requirements, hazardous waste transportation regulations and standards, and others that may apply.**

## **1900 Third Street Test Results**

### ***Comment***

Page V.J.25: Figures V.J.5-6-7-8: The soils borings' results provided by 1900 Third Street are not shown on these figures and most of the base maps are from the prior Mission Bay Plan which

excluded the 1900 Third Street site. Please include, at least as an appendix, the report of the test borings that 1900 Third Street LLC provided. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

#### ***Response***

Numerous individual and site-wide investigations have been performed subsequent to the 1990 FEIR, including those at the 1900 Third Street location. Those reports that contain additional site data are either specifically referenced in the SEIR or are included in Appendix Table I.1 on pp. I.2-I.4, as appropriate. The investigations performed for 1900 Third Street are cited in Endnotes 26, 71, 72, and 73 on pp. V.J.102 and V.J.105 at the end of Section V.J, Contaminated Soils and Groundwater. Thus, all of the identified reports, including those for the Castle Metals site, are part of the background documents and the administrative record for the proposed project. As discussed on p. V.J.19, the combination of these individual and site-wide reports, which include those areas that would be developed by other entities, has provided information to sufficiently identify potential soil and groundwater contamination hazards.

Soil and groundwater samples were collected adjacent to the Castle Metals site during the 1997 Mission Bay South investigation. An evaluation of the 1997 Mission Bay South investigation data indicates there is no evidence that the low levels of contaminants detected in soils at the Castle Metals site differ substantially from the adjacent locations that were tested during the 1997 investigation. That information, combined with site-specific data from the Castle Metals site obtained during the 1993, 1994, and 1996 LAW investigations, adequately characterizes conditions at the Castle Metals site. The SEIR contains sufficient data about chemicals in the soil and groundwater to inform the decision-making process. The addition of the site-specific information requested by the comment would not alter the discussion of existing conditions at the Castle Metals site or the conclusions regarding potential human health or environmental risk presented in the SEIR for that site.

#### **Significance Criteria for Chemicals in Soil/Groundwater**

##### ***Comment***

Page V.J.84, Paragraph 3, sentence 3. As a clarification, DTSC has adopted U.S. EPA's policy of utilizing a risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ , with  $1 \times 10^{-6}$  being the point of departure for risk criteria. On a site-specific basis, DTSC has made risk management decisions, with community input, to utilize a risk criteria of  $1 \times 10^{-5}$  at other Sites. DTSC defers to the RWQCB's decision to establish the risk criteria at  $1 \times 10^{-5}$  at this Site. (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)



**Response**

The Regional Water Quality Control Board (RWQCB) has been designated as Administering Agency, pursuant to AB2061, to oversee the site investigation and remediation of hazardous materials releases in the Project Area, as noted in "Regional Water Quality Control Board as Administering Agency" on pp. V.J.48-V.J.49. The Department of Toxic Substances Control (DTSC) is one of a number of Support Agencies that the RWQCB may consult with regarding contamination issues in the Mission Bay Project Area. In its role as Administering Agency, the RWQCB is granted jurisdiction over all activities regarding investigation and remediation. These activities also include preparation of any necessary human health risk assessments, such as that prepared for the proposed project, and any additional assessments that would be prepared in conjunction with Risk Management Plans. The assumptions and methods used in the risk assessments and the results of those evaluations are subject to RWQCB review and approval.

The discussion on p. V.J.62 notes that the RWQCB staff has determined that a risk criteria of  $1 \times 10^{-5}$  is appropriate to evaluate the potential risks to human health. The RWQCB staff formalized that decision in a letter to Philip Fitzwater at ENVIRON dated January 16, 1998. The basis for the decision was stated in that letter, which is cited in Endnotes 109, 117, 122, and 125 on pp. V.J.107-V.J.108 at the end of Section V.J, Contaminated Soils and Groundwater. The letter is also presented as Appendix G in *Site Investigation and Risk Evaluation Report, Mission Bay South of Channel, San Francisco, California*, prepared by ENVIRON and published in February 1998. As indicated in the January 16, 1998 letter, RWQCB staff recognizes that "EPA considers a cumulative incremental carcinogenic risk level of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  . . . as the acceptable range of risk management scenarios." As indicated in its comment, DTSC has also adopted the EPA's policy of using a risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ , with  $1 \times 10^{-5}$  used on a site-specific basis for risk management decisions. The comment indicates that it defers to the RWQCB's decision to establish the risk criteria at  $1 \times 10^{-5}$  for the Mission Bay Project Area.

To clarify SEIR text, the following sentence has been added as a new second sentence in the first full paragraph on p. V.J.62:

**The DTSC has also adopted the U.S. EPA's policy of using a risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ ; on a site-specific basis DTSC has made risk management decisions, with community input, to use  $1 \times 10^{-5}$ .**

The third sentence in the second full paragraph on p. V.J.84 has been revised to read:

**Risk criteria used in the development of the SSTLs were 10 excess cancer cases per 1 million ( $1 \times 10^{-5}$ ) and a Hazard Index of 1, consistent with policies of the RWQCB and DTSC CalEPA; DTSC has deferred to the RWQCB's decision on this matter./145/**

Endnote 145, on p. V.J.110, has been expanded to include the following:

**Barbara J. Cook, P.E., Chief, Northern California - Coastal Operations Branch,  
Department of Toxic Substances Control, California Environmental Protection Agency,  
letter of June 8, 1998, commenting on the Draft SEIR.**

### **Risks to Existing and Future Residents**

#### *Comments*

While we understand from the CAC Toxics Consultant, Dr. Martha Kohler, that the background technical [documents] address the impact on local residents of exposure durations and times, the D SEIR repeatedly refers to "Preliminary Remediation Goals (PRGs). . .for the protection of industrial land uses" (V.J.42) and "COPIC below Region IX Industrial PRGs adjusted to account for a limited six-month exposure period. . ." (V.J.43). Even though there are no (authorized) residents within the Project Area, Mission Creek Harbor Association is surrounded by the Project Area on three sides, and there are several new live-work units immediately adjacent to the Project area. We would like the SEIR to confirm that long-term residents of the immediate area, not just those who have a limited six-month exposure, are adequately protected, given the level of toxic materials in soil and groundwater. . .

As a result of Dr. Kohler's review, and information provided by Steve Morse, Chief of the Toxics Cleanup Division of the RWQCB, the Mission Bay CAC:. . .

3. Requests clarification in the final SEIR of how risk assessments and proposed RMP will protect businesses and residents in and adjacent to the Project Area, before, during and after construction. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

While the technical documents adequately address the impact on local residents of exposures, durations, and times, the EIR itself does not clearly explain those impacts and should include a more specific description on how nearby residents are addressed in the risk assessments.

This is needed for all three time phases included in the assessments: Prior site development, during development, and after development of the project is complete. In particular are the time durations and exposures appropriate to nearby residents. . .

We will be requesting clarification in the final EIR of how the risk assessments and proposed risk management plans will protect businesses and residents in and adjacent to the project area, before, during, and after construction. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)



***Response***

Comments have raised questions regarding how the risk assessments and the proposed risk management plans will protect the health of individuals who work and live in and around the Project Area. Although one comment acknowledges that the background documents adequately address the impact on local residents, and that the exposure durations and times used in the analysis are appropriate, the comment requests clarification in the final SEIR on how the risk assessment and proposed risk management plans will protect businesses and residents in and adjacent to the Project Area, for all three time phases: before, during, and after construction. In particular, the comments request confirmation that long-term residents of the immediate area, which includes Mission Creek Harbor Association houseboats and new live-work units immediately adjacent to the Project Area, would be adequately protected throughout development of the project.

The analyses prepared for pre-development conditions, for potential impacts during development, and for post-development conditions once the Project Area is built out, all take into account people who live and work in areas adjacent to the Project Area, either directly or indirectly. For example, in the discussion under “Exposure from Vacant, Undeveloped Sites” on pp. V.J.64-V.J.67, the individuals who could be affected would include Project Area residents, workers, or visitors at developed parcels adjacent to a vacant site. An evaluation that includes Project Area residents adjacent to a vacant site would also apply to residents of the houseboats or workers at a site across Mariposa Street, insofar as they may be adjacent to a vacant, exposed site. In the discussion of impacts from construction activities, the exposed populations could include construction workers or residents or employees in existing or new buildings in the Project Area (see p. V.J.68). As explained further in the background documentation for the discussion of construction impacts, the term “nearby populations” is “defined as those populations in the Project Area that might be directly adjacent to the area being developed, as well as populations that are further away or off-site from the area being developed.”/1/ Thus, the houseboat populations were included in the overall definition of those who could be affected by construction activities. Finally, the analysis of post-development conditions described in the SEIR on pp. V.J.82-V.J.91 and in Appendix I on pp. I.64-I.75, summarizes the more detailed analysis prepared by ENVIRON International Corporation in the 1998 Mission Bay South Report and cited on p. V.J.82./2/ In the 1998 Mission Bay South Report, Appendix F identifies potentially exposed populations in the post-development period, specifically identifying on-site and off-site workers and residents, and specifically states that “residents living in houseboats (on China Basin Channel) will have potential exposures to constituents in soil and ground water similar to the offsite residents.”/3/ The response below elaborates on how the analyses of pre-development, construction, and post-development conditions address potential effects to residents and workers on sites near the Project Area.

As described in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, on p. VI.41, development activities within the Project Area would not begin until a Risk Management Plan or Plans (RMP) has been prepared and approved by the Regional Water Quality Control Board (RWQCB) staff. The purpose of the RMP is to furnish a decision framework for managing the environmental conditions and to set forth the specific management measures for reducing any potentially significant risks associated with the development. Compliance with the provisions set forth in the RMP will enable phased development and occupancy of the Project Area to occur over time in a coordinated and health protective manner. As identified and discussed on pp. VI.41-VI.45, the RMP will describe the range of management measures that would control risks to human health and the environment during the three phases of the project: prior to, during, and post development. The conceptual plan for managing risks associated with development and occupancy of the Project Area was approved by RWQCB and the interagency Consultative Working Group (including representatives of the CalEPA Department of Toxic Substances Control [DTSC] and the City of San Francisco) in the adoption of RWQCB Resolution No. 98-044 on May 20, 1998. Further support of the plan by DTSC is provided in their written comments on the SEIR, as they have stated that they believe that "the project incorporates actions which would address any potential risk to human health or the environment."

A brief summary of the potential impacts associated with each of these three phases of development, and the management measures that are proposed to be implemented during the three phases to minimize those impacts on human populations that are present in the Project Area, and that therefore would minimize impacts on people adjacent to the Project Area, is provided in the following response. As described in the response, the approach used in evaluating the impacts associated with each of the three phases of the project relied on a series of conservative risk analyses, in which assumptions regarding the location of the populations, and the amount of exposure that they may potentially incur were developed with the intention of overestimating the magnitude of the potential impact.

#### Measures to Protect Human Health Prior to Development

As discussed on pp. V.J.60-V.J.61, development and occupancy of the Project Area would occur in phases over a projected 17-year period, where some areas would be developed and occupied while demolition and construction would be occurring in other areas. During the later phases of the development, some of the proposed commercial, industrial, and residential uses would be completed and occupied, while some surrounding parcels may still remain vacant. Consequently, over the course of the 17-year development period, an increasingly greater number of people could be affected



by chemicals in soil or groundwater on vacant sites and by construction activities involving the disturbance of soil or groundwater during the later phases of development.

As described on pp. II.23-II.24, V.J.42, and V.J.64-V.J.67, the RMP would evaluate in detail the potential for the current conditions within the Project Area to adversely impact the health of individuals who are working or living within or near the Project Area, including individuals who may move into the Project Area during the course of the development. The objective of the risk evaluation would be to evaluate whether exposure to exposed native soils that are present within the Project Area would pose a risk to populations who may be exposed during the interim period, which is defined as the period of time between initial project approval and complete build-out. The evaluation would be conducted by developing interim target levels (ITLs) for each of the chemicals present in the soil for those populations that could be exposed over time until development is complete, as explained on pp. V.J.65-V.J.66. This evaluation would be conducted using standard regulatory risk assessment procedures, consisting of the following steps, each of which is listed in the Project Features in Section VI, Mitigation Measures: Contaminated Soils and Groundwater on pp. VI.42-VI.43:

- Evaluate Sampling Results to Identify Constituents of Concern.
- Identify all current populations who exist within and around the Project Area, and the populations that are likely to be present once the development occurs. Exposed populations that will be evaluated include nearby residents (which would include current houseboat residents, and residents in the other areas, such as Potrero Hill, that are outside of the Project Area), future residents that may be occupying portions within the Project Area, visitors/trespassers, and workers within and adjacent to the Project Area.
- Identification of Exposure Pathways/Assumptions. Once the populations who could come in contact with the exposed soils have been identified, the risk evaluation would then describe the pathways through which the populations could be exposed to the constituents present in exposed soils between now and when the project build out is complete. The specific exposure assumptions would be based on existing USEPA and Cal/EPA Department of Toxic Substances Control recommended exposure assumptions./4/,/5/ Conservative reasonable maximum exposure (RME) assumptions recommended by USEPA for estimating the length of time that an individual may be present in the Project Area and may be exposed to chemicals would be used. Because the USEPA-recommended RME for the length of time that an individual may be living in one location is 30 years, this assumption will be used in the risk evaluation.
- Development of Health-Based Interim Target Levels (ITLs) for Interim Exposures. Using the specific exposure information that would be developed as described above, combined with toxicity values developed by the USEPA and Cal/EPA, contaminant-specific interim target levels (ITLs) would be established following regulatory risk assessment guidelines established by the DTSC and EPA.

- Comparison of ITLs for Interim Exposures to the Range of Concentrations Detected in Soils. The chemical-specific ITLs would then be compared to the range of concentrations detected in the exposed soils. Areas where the concentration in the exposed soils exceed the ITLs would be identified, as these will be the areas where potential interim risk management measures may be appropriate.
- Identification of Interim Risk Management Measures. If areas are identified where the health-based ITLs exceed the concentrations detected in the soil, then the specific Interim Risk Management Measures (IRMMs) that would reduce potential risks to Project Area occupants and visitors during the interim period would be identified. The types of IRMMs that could be required and that would be sufficient to minimize any potential interim risks include measures such as the following: restrict access to soils through fencing; hydroseed or apply other vegetative or nonvegetative cover to the uncovered areas; include safety notices in leases; and conduct periodic monitoring and audits of the Project Area.

Using the human health-based risk assessment approach described above to identify areas of potential concern, and then implementing the appropriate interim risk management measures would reduce, to acceptable levels, any potential human health impacts posed by exposed soils that may exist in the interim period prior to permanent development.

#### Measures to Protect Human Health During Development of the Project Area

Pages V.J. 67-V.J.82 identify the types of activities that may be associated with the construction and development of the Project Area that could potentially impact the health of construction workers, or any other workers, residents, or visitors in the nearby vicinity of the construction activities. As described, the activities that could result in exposures of either nearby populations or construction workers include: 1) excavation, grading, trenching, and other soil movement/stockpiling activities where workers and the public could come into direct contact with exposed soils/stockpiled soils, or be exposed to fugitive dusts; and 2) the excavation of unknown structures and the identification of unknown areas of contamination. Additional activities, such as construction dewatering or utility trench excavation, could contribute to the spread of impacted groundwater. Further, soils from an active construction sites could be carried off-site into nearby surface water bodies after a large rain storm.

Following the identification of each of the potential impacts, the SEIR then provides an analysis of the impacts, followed by a discussion of the specific management measures that would be included in the RMP in order to minimize any potential impacts associated with the development of the Project Area. The analysis of the particular impacts included a discussion of the potential impacts on all populations potentially impacted, including nearby residents, workers, and visitors. The management measures



identified were developed specifically to protect the existing nearby populations, as well as the populations that would be present in the Project Area once the phased occupancy begins.

During the construction of the Project Area, the nearby residents, workers, or visitors who may be directly adjacent to an area under development would be protected through the implementation of the dust control measures. The project features that would be implemented to control dust are identified in Section V.J, Mitigation Measures: Contaminated Soils and Groundwater, Measure J.1f, on p. VI.43, and in Section VI.F, Air Quality, Measure F.2, on p. VI.33. As described on pp. V.J.68-V.J.70, a risk assessment was conducted to determine whether continuous, 20-year exposure to unmitigated dust emissions from the development process would adversely impact the health of individuals in the Project Area. The analysis concluded that even if dust suppression methods were not implemented, and if someone were to be exposed continuously for 20 years to high dust levels (as if they were directly adjacent to a development area, in the areas of greatest potential for dust exposure, for the entire 20 years), the risks to human populations would be considered acceptable by the U.S. EPA and would be below the level defined by BAAQMD to represent a significant threshold for exposure to cancer-causing chemicals. Because the analysis was prepared for someone immediately adjacent to a construction site, this conclusion also would be applicable to all current populations within and adjacent to the Project Area who would be located further from a construction site (including the community of houseboats, and existing worker populations), and would likewise hold for the future populations who may be present in the Project Area once the phased occupancy begins. Nevertheless, the dust control measures detailed on p. VI.33 are proposed to be implemented as part of the RMP in order to keep dust levels to a minimum. As stated on p. V.J.71, compliance with the BAAQMD recommended dust control measures would reduce temporary impacts associated with dusts to insignificant levels.

The dust control measures would control dust generated from demolition and excavation activities, truck traffic, wind traversing soil stockpiles and dusts generated from loading transportation vehicles. The dust control measures would be supplemented by the implementation of an off-site dust monitoring program. The off-site dust monitoring plan would be used to demonstrate that the health and safety of individuals not engaged in construction activities (i.e., visitors, workers, and residents) were not being adversely impacted by dusts that may be generated by construction activities, as described on p. V.J.71 in Section V.J, Contaminated Soils and Groundwater, and on p. VI.44 in Section VI.J, Mitigation Measures.

Other general soil handling/management protocols that would be detailed in the RMP, and that are also identified in the SEIR, would minimize the potential for human contact with soils during the development of the Project Area. General soil handling and management protocols to be described in

the RMP include the adoption of health-protective criteria for all imported soil to be used in the landscaped areas, and restrictions on where native soil from within the Project Area may be placed. Additionally, the soil management protocols would describe the management and placement restrictions on soil stockpiles. Compliance with the soil handling and soil management protocols that are described in the SEIR on pp. VI.43-VI.44 and that are proposed to be contained in the RMP would minimize the potential for human populations to have direct contact with native soils.

Potential impacts to the construction workers engaged in the development of the Project Area, or other workers who may have direct contact with subsurface soils and/or groundwater would be minimized through compliance with the applicable Cal/OSHA worker safety regulations. Compliance with worker safety regulations, as described on pp. V.J.73- V.J.74, would also reduce potential hazards to non-construction workers and occupants because required site monitoring, reporting and other controls would be in place. Specific site access controls, described on pp. V.J.75 and VI.43, would be implemented during construction, and would minimize the potential for unauthorized personnel, such as visitors, or trespassers, to gain access to construction sites and come into direct contact with exposed soils. The RMP would also specify contingency monitoring, notification, and control procedures to be implemented if, and when, unknown areas of contamination are identified during the development of the Project Area. Compliance with the appropriate Cal/OSHA worker safety regulations and the contingency procedures would minimize potential impacts on workers and surrounding populations associated with the identification of unknown subsurface structures or areas of contamination because site personnel will be trained to recognize potential hazards, and will know how to respond to these hazards.

Additional management measures are described in the SEIR and would be discussed in the RMP to minimize the potential impacts associated with offsite transport of soil through surface water runoff. As discussed in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, in Measure J.1g on p. VI.44, and in more detail in Section VI.K, Mitigation Measures: Hydrology and Water Quality, Measure K.1 on pp. VI.45-VI.46, offsite transport of soil would be controlled through the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would be prepared in accordance with guidelines contained in the State's General Construction Activity Stormwater Permit and would be based on the Best Management Practices (BMPs) contained in the *Construction Activity Best Management Practices Handbook* (see pp. V.K.59-V.K.60 in Section V.K, Hydrology and Water Quality). Compliance with the SWPPP and implementation of the BMPs would control untreated discharges of stormwater runoff and sediments from the construction area into the nearby San Francisco Bay or China Basin Channel. As discussed on p. VI.44 in Measure J.1g (a project feature), the RMP would also identify protocols for managing groundwater, which would include measures to prevent unacceptable migration of contamination from defined plumes



during dewatering, and procedures for the installation of subsurface pipelines and other utilities, where necessary, to prevent lateral transmission of chemicals in groundwater.

Implementation of these management measures that are described in the SEIR and are planned to be presented in the RMP, would protect the current and future populations within and around the Project Area from the potential adverse impacts associated with project development.

#### Measures to Protect Human Health After Development of the Project Area is Complete

A quantitative human health risk assessment was prepared by ENVIRON to evaluate the potential human health effects associated with the post-development conditions in the Project Area. The risk evaluation is summarized on pp. V.J.82-V.J.90. Based on the specific development plans for the area, the risk evaluation assumed that all exposed soil locations would ultimately be covered with pavement, buildings, landscaping, or fill. Based on the land use plans for the Project Area, the populations who were evaluated in this risk assessment include: on-site and off-site retail and commercial workers; visitors to and shoppers at commercial and retail establishments; child care and school facility attendees; students, faculty and support staff of UCSF; onsite and offsite residents and park visitors. The risk evaluation concluded that the potential risks posed by the chemicals present in the soils and groundwater after project completion are below the applicable human health criteria and would not be significant.

As discussed on p. V.J.85, the analysis of post-development effects assumes that certain land use restrictions within the Project Area remain in place. The land use restrictions to be documented in the RMP include: covering of the Project Area; limitations on future development within the Project Area, specifying that no residences with unrestricted access to soil in single-family residences with front yards or backyards would be allowed; prohibition on the use of shallow groundwater; and the establishment of protocols for future subsurface activities by workers involved in maintenance, construction, or repair work.

Considering the intended uses of the Project Area, and the site management procedures that could accompany these uses, the risks posed by the environmental conditions following the development of the Project Area would not exceed applicable human health guidelines; the environmental conditions within the Project Area are appropriate and health protective for the intended use.

In summary, a detailed conceptual plan for managing the potential risks associated with the site conditions prior to, during, and after construction has been developed, and was approved by the RWQCB and the interagency Consultative Working Group (i.e., including representatives of DTSC

and the City of San Francisco) in the adoption of the RWQCB Resolution No. 98-044. The plan was based on information gained from extensive soil and groundwater testing in the Project Area, knowledge of existing and future land uses and populations, and identification and analysis of potential human health risks to existing and future populations from existing conditions and planned future activities associated with the project.

***Comment***

Section II, Page II.23, Contaminated Soil and Groundwater, Existing Conditions, Paragraph 1, last sentence. This sentence states that "As of April 1998, no state or local regulatory agency has indicated that remediation is necessary in other Project Area locations." As a clarification, DTSC believes that the project incorporates actions which would address any potential risk to human health or the environment. It is our understanding that the project incorporates the use of environmental restrictions and implementation of risk management plan(s) to achieve a permanent remedy in areas outside the free petroleum product area. Therefore, "remediation" will take place. The risk assessment included in the Technical Memorandum #4 indicates that there is not an acute risk (based upon a six month exposure period) and therefore immediate actions are not required. However, additional risk evaluation will be conducted as part of the Risk Management Plans to determine the need for implementation of remedial actions over the 20-year construction period. These actions could include vegetating vacant lots, fencing properties to prevent access, and/or covering open areas with asphalt or concrete. (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)

***Response***

The sentence referenced in the comment is found in the "Existing Conditions" section in Chapter II, Summary, under "Contaminated Soils and Groundwater." The sentence was intended to refer to existing conditions in the Project Area, except for the area near 16th Street that is discussed earlier in the paragraph. In order to clarify this portion of the SEIR Summary, the last sentence in the first paragraph under "Existing Conditions" on p. II.23 has been revised to read:

**As of April 1998, no state or local regulatory agency has indicated that current conditions require remediation ~~is necessary~~ in other Project Area locations.**

As discussed in Chapter II, Summary, under "Potential Effects of the Proposed Project," and in Section V.J, Contaminated Soils and Groundwater: Impacts, Risk Management Plans and deed restrictions would provide for "remedial" measures on exposed sites prior to development and during development of individual sites, if such measures are determined to be necessary based on risk evaluations.



## Construction Dust Effects

### Comments

The technical documents state that absent control measures, construction related dust could have an impact on terrestrial and avian wildlife, as well as potential exposure to aquatic organisms through deposition of particulates onto surface water bodies. This is not considered a significant impact because:

“current and future conditions within the Project Area do not provide habitat capable of supporting a significant terrestrial wildlife community. Further, although various avian species use the area around China Basin Channel (Mission Creek) for loafing and foraging, . . . the avian species would likely make use of foraging habitats, such as mudflats, over a large home range area, and would not be present in one foraging area for an extended period of time. . . . it is unlikely that avian species could be exposed to significant exposures of dusts, and the chemicals adsorbed to the dusts, during the construction of the project area.”

Please note that there are currently two nesting gulls in Mission Creek, and this is a valuable salt marsh habitat for foraging birds and a protected nursery for several species of fish, including herring, pile perch, and anchovies. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

The technical documents state that absent control measures, construction-related dust will have an impact on terrestrial and avian wildlife. Because there's not supposed to be any wildlife there, this is not supposed to be a significant impact.

We do feel that this is a significant impact, and we'll be addressing that in our written comments. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### Response

The comments suggest that construction-related dust could have a significant environmental effect on the aquatic and terrestrial environment.

The SEIR discusses potential dust-related effects on fish and wildlife on pp. V.J.72-V.J.73. Contrary to assertions in the comments that the SEIR bases its conclusion of no significant construction impacts on a statement that the Project Area supports no wildlife, the SEIR states that current and future conditions “do not provide habitat capable of supporting an *important* terrestrial [that is, land-based] wildlife community.” The SEIR, on p. V.J.72, also states that “The potential impacts of construction-related dusts on the ecological environment could include potential *exposure to* terrestrial and avian wildlife. . . .” [emphasis added]. As noted in Section V.L, Vegetation and Wildlife, on p. V.L.1, the Project Area supports only common, widespread terrestrial plant and animal species; there are no special status terrestrial species in the Project Area. This being the case, project construction dust could not cause significant impacts to special status terrestrial species.

The presence of some nesting gulls in or near the Channel would not change the basic conclusions about the potential significant effects of chemicals in soils in the Project Area during construction, because gulls are not rare, endangered, or threatened. The SEIR discusses factors that influence the potential exposure of foraging birds to construction-related dust on p. V.J.72. The SEIR also states, on p. V.J.72, that under uncontrolled conditions, there could be impacts on the aquatic environment from windblown dust deposition on nearby water bodies. However, the text goes on to explain that even without dust controls, the impact would not be significant because windblown dust would be dispersed over a wide area, with no one area receiving a significant amount of dust. As stated on p. V.J.73, "Thus, potential impacts on the aquatic environment from uncontrolled dusts blowing from the construction zone and depositing onto surface water would be less than significant, even if dust control measures were not implemented." Thus, fish and other aquatic species would not experience significant environmental impacts from construction dust. In addition, dust control measures are proposed to be included in the project, such as watering active construction sites at least twice daily; covering storage piles; sweeping paved access routes, streets, and construction parking areas; installing wind breaks and/or planting trees and other vegetation; and suspending excavation and grading on high wind days, as explained on p. VI.33 in Measure F.2 (a project feature).

### **Risk Management Plans (RMPs)**

#### Public Review and Comment on RMPs

##### *Comments*

But in the EIR, all of the mitigation is in the form of RMPs or risk management plans, which, of course, are not the function of the EIRS.

So I think what we really need is to have those RMPs developed and done in an open process as quickly as possible so that we know what's going to happen and how is this going to be handled, especially during the development process.

Because this is a long-term development for the largest part of the time, what's going to occur is that you will have people living and working near open sites or near native soils which contain a high degree of toxics. And we are really concerned about how those are going to be handled and how those RMPs plan to protect the citizens over the long term. (*Jennifer Clary, Board of Directors, San Francisco Tomorrow*)

##### **Contaminated Soils and Groundwater**

Every reference to the long and short-term handling of soil and groundwater contamination in this document is coupled with the use of RMPs (Risk Management Plans). It seems clear that more than one RMP will be developed to cover all aspects of the project. However, this document neither gives a timetable for the adoption and implementation of the RMPs, nor gives any clear idea as to how many will be required and what each one will cover. We think that the RMPs should have been



developed and circulated with the EIR. If that is no longer possible, they should still have the same circulation and comment process as the EIR, and certification of the EIR should be contingent on adoption of the RMPs. The final EIR should also include a table listing the RMPs that are developed for the project. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

The Absence Of A Risk Management Plan At This Time Makes It Impossible To Fully Comment On The SEIR.

RMP should already have been prepared and submitted to RWQCB staff. The Summary alone takes a number of pages to describe what the drafters expect the RMP to include, indeed it is the primary proposed mitigation measure for the potential risks posed by contaminants found in the soils at the Mission Bay project site. Vol. I at II.24 [pp. II.23-II.24 in the Final SEIR]. There is no reason for the RMP not to be available at this time. The review of the RMP by Regional Board staff is not subject to formal public comments. Not having this critical document available at this time means that the interested public will not have an opportunity to comment on this critical component of the proposed risk management at the Mission Bay site. The CEQA analysis should await the preparation of the RMP. (*Michael R. Lozeau, Executive Director San Francisco BayKeeper*)

As a result of Dr. Kohler's review, and information provided by Steve Morse, Chief of the Toxics Cleanup Division of the RWQCB, the Mission Bay CAC:. . .

2. Would like to have the ability to review and comment on the RMP(s) that are proposed for approval by the RWQCB, to ensure that public health, water quality, and the environment are protected before, during and after construction. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### **Response**

Comments ask that the Risk Management Plan or Plans (RMP) proposed by Catellus be included in the SEIR, and ask for the number of Plans and the timetable for adoption and implementation. Other comments note that review of the RMP by Regional Water Quality Control Board staff would not be subject to formal public review and comment, and therefore request that the RMP be circulated for public comment in an open process either separately or prior to SEIR certification.

The SEIR contains a considerable amount of information about chemicals in the soil and groundwater in the Project Area, and substantially more than was available in the 1990 FEIR. The SEIR generally describes the expected contents of the RMP that are planned to be prepared to establish the detailed approaches to managing soils and groundwater before, during, and following construction in the Project Area in Section V.J, Contaminated Soils and Groundwater. Measure J.1, a project feature discussed on pp. VI.41-VI.45, contains a detailed description of required elements of the RMP, implementation of which will assure that impacts are less than significant. The entire text of the RMP is not necessary in the SEIR to inform this part of the decision-making process on the project. This level of detail would be available as specific development phases are proposed. In light of the

considerable information available about chemicals in soil and groundwater and the level of analysis in the SEIR, it is not expected that that detail would raise significant new environmental issues.

Separate from the Mission Bay SEIR process, the Regional Water Quality Control Board (RWQCB) staff has created a process for both interagency and public review of critical working documents for development of the Catellus- and city-owned portions of the Mission Bay Project Area, prior to making its recommendations to the Regional Board. For example, ENVIRON's February 4, 1998 *Site Investigation and Risk Evaluation Report, Mission Bay South of Channel* contains the data from the soil and groundwater investigation of Mission Bay South and an assessment of the human health and ecological risks posed by soil and groundwater in Mission Bay South. The data contained in this report has been shared with interested environmental groups in the summer of 1997, as it became available. BayKeeper, through its "Clean Waterfront Project," was an active participant in this process. After the February 1998 report was issued, the RWQCB staff 1) met with BayKeeper in April to discuss the contents and findings of the report, 2) met with BayKeeper again in a separate meeting to explain the fate and transport model and results, 3) shared with BayKeeper an early draft of the RWQCB staff report regarding the proposed approval of the completion of the investigation, the risk assessment, and of Catellus' proposed conceptual approach toward the management of soil and groundwater conditions in the Project Area, and 4) met three times with the interagency Consultative Working Group (including representatives of DTSC and the San Francisco Department of Public Health) established under the AB 2061 process to discuss the regulatory oversight and approval process. (The AB2061 processes is described on pp. V.J.48-V.J.49.) RWQCB staff also met several times with and provided information to the Mission Bay Citizen's Advisory Committee and its Toxics Subcommittee. The RWQCB held a public meeting on May 20, 1998, at which time public comment was accepted on whether the proposed resolution concurring with the Consultative Workgroup and RWQCB staff recommendation that the investigation of soil and groundwater for Mission Bay North and Mission Bay South is complete. The RWQCB adopted Resolution No. 98-044 on May 20 following the public hearing.

While a public hearing before the RWQCB on the text of the RMP is neither required nor proposed, the RWQCB staff will similarly solicit input from interested parties on the contents of the draft Risk Management Plan or Plans (RMP) for the Catellus and city-owned parcels in the Project Area. The interagency Consultative Working Group continues to meet to review and approve various documents, and the RWQCB staff plans to meet with interested members of the public (including representatives from The Regents of the University of California, BayKeeper, the Mission Bay Citizens Advisory Committee, and other interested members of the public who have previously expressed or newly express an interest in the RMPs) to explain the proposed Catellus RMP(s) and gather input prior to approval by the RWQCB staff./6/ Ultimately, a proposed environmental Certificate of Completion



under Section 25264 of the Cal. Health & Safety Code (which would be based in part on the protections provided by the RMP and in deed restrictions) is expected to be presented to the nine members of the Regional Board for their approval at a public hearing. Members of the public would have the opportunity for advance notice and public comments on that proposed Certificate of Completion, and to present testimony at the public hearing. No schedule has been established for this process.

No construction activities would take place until the RMP is approved by the RWQCB staff. To obtain a Certificate of Completion, the RWQCB would require an approved RMP and recorded deed restrictions./7/ It is not known whether there would be one RMP or several covering the Catellus and city-owned properties in the Project Area. Implementation would be carried out for each development phase on a site-by-site basis; predevelopment measures to the extent required (Measures J.1b and J.1c, which are project features) would be carried out as part of complying with the RMP and recorded deed restrictions, a prerequisite to obtaining the Certificate of Completion.

On p. II.25, the second sentence in the last paragraph has been revised to read:

**Because the RMP is not yet completed and approved by RWQCB staff, this SEIR defines required features of the RMP that are necessary to reduce potential hazards to a less-than-significant level.**

#### Enforcement Procedures for RMPs

##### *Comment*

DTSC suggests that copies of the RMP(s) and environmental use restrictions be provided to the following City and County of San Francisco departments: Department of Public Health, Department of Public Works, and Department of Building Inspections for placement in their files. Therefore, if permits are requested in the future, staff can assist the RWQCB in ensuring that the work proposed is consistent with the RMP requirements. (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)

##### *Response*

The suggestion that copies of the Risk Management Plan or Plans (RMP) be supplied to various city agencies to enhance enforcement opportunities is appreciated. Although the RWQCB will have primary enforcement authority over the RMP, as the lead agency under the AB2061 process, the City will have an enforcement role primarily through the Public Works Code Article 20 (Maher Ordinance) process. Article 20 currently includes review for compliance by the Department of Public Health prior to issuance of building permits by the Department of Building Inspection. Therefore, it

would probably be appropriate for these departments to have copies of the RMP or RMPs and of any property use restrictions. The RWQCB, in its May 20, 1998 approval of Catellus site investigation work, stated that it would require the RMP(s) to specify a framework for coordinating Article 20 compliance with other parts of the RMP(s). Thus it is expected that coordination between the City's role in overseeing Article 20 compliance and other features of the RMPs will be clarified as the RMP or RMPs are developed.

#### Applicability of RMPs to All Properties in Redevelopment Areas

##### **Comments**

Section II, Page II.26, Paragraph 1. Please clarify when a property owner of any portion of the Project Area would not have responsibility for property maintenance as this appears to limit who would be apprised of the RMP and its contents and who would be required to comply with its provisions. (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)

General: When an RMP is being scoped and prepared for Catellus' property in Mission Bay South near 1900 Third Street, the 1900 Third Street LLC would like to be notified of its outcome if any of the impacts or risk management actions would directly or indirectly affect the use or developability of 1900 Third Street. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

##### **Response**

As noted in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, the analysis of Contaminated Soils and Groundwater impacts assumes preparation and implementation of a Risk Management Plan or Plans (RMP) for the Project Area as a feature of the project. One comment asks how the RMP that Catellus is developing will affect non-Catellus property. One comment questions the Summary discussion of the RMP, as it explains the applicability of the RMP. The sentence questioned (the second sentence in the third paragraph on p. II.25 of the Final SEIR [first paragraph on p. II.26 of the Draft SEIR]) has been revised to more clearly summarize Measure J.1a as follows: (Measure J.1a, a project feature, is in the "RMP Enforcement" subsection on p. VI.41.)

**Deed restrictions would be recorded for all property, placing limits on future uses in the Project Area consistent with the provisions of the RMP, and each owner of any portion of the Project Area with responsibility for property maintenance would be apprised of the RMP and its contents current and future property owners would thereby be provided notice of these use restrictions and other requirements in the RMP and would be required to comply with its applicable provisions of the RMP.**

The deed restrictions included in this project feature are discussed on p. VI.41. As part of the project, Owner Participation Agreements are proposed between Catellus and the Redevelopment



Agency. As to the other property owners, the Redevelopment Plans provide that, as a condition to participation in redevelopment, that each private property owner enter into an Owner Participation Agreement. Owner Participation Agreements or other agreements between each property owner and the Redevelopment Agency would provide a vehicle to require all property owners to record deed restrictions for their property, providing all current and future property owners with notice of the RMP referenced in the deed restriction, whether or not the owners have property management responsibility. The deed restrictions would include use restrictions on the property based on the RMP for that property, would require property owners to inform occupants of the property of the RMP, and would inform property owners of the residual regulatory authority retained by the Regional Water Quality Control Board. The owner of 1900 Third Street therefore would be required to record a deed restriction for its property as a condition to an Owner Participation Agreement or other agreement between 1900 Third Street and the Redevelopment Agency. The 1900 Third Street owner would need to have an approved RMP from the Regional Water Quality Control Board (RWQCB) staff in order to record the deed restrictions. This RMP would be separate from and likely would be different than the RMP prepared by Catellus, based on the limited nature of the chemicals found in the soil on the 1900 Third Street site.

Catellus would develop a Risk Management Plan or Plans that would apply to its property and city-owned property in the Project Area. Prior to completion of the Catellus RMP, as discussed under "Public Review and Comment on RMPs," on pp. XII.210-XII.213, it is expected that the RWQCB staff will solicit input from interested parties on the draft RMP that Catellus is developing. Members of the public and interested property owners in or near the Project Area, including 1900 Third Street interests, may wish to notify the RWQCB staff of their interest in the Catellus Mission Bay RMP.

## **Metals in Groundwater**

### ***Comments***

The environmental review underestimates the impacts of contaminated groundwater that is discharging into Mission Creek and San Francisco Bay. . .

The SEIR Does Not Adequately Analyze The Ecological Impacts Of Groundwater Contaminated With Heavy Metals.

There is no basis for the conclusion that heightened "attenuation" of metals in ground water occurs within 50 feet of the Bay but no where else at the site. Vol. II at V.J.45-46. The analysis claims to be conservative by not factoring in dilution of the ground water as it enters the Bay. Nevertheless, that is exactly what the analysis does by diluting the measured high concentrations of metals in the groundwater by a factor of 10 based on dilution by Bay water within the saturated 50 foot shoreline area. Polluted groundwater should be a significant concern.

As the SEIR asserts time and time again, metals are contributed to groundwater from sources scattered heterogeneously throughout the fill material in Mission Bay. Vol. II at V.J.36. Thus, it is little surprise that “a statistical analysis of upgradient versus downgradient concentrations of metals indicated that arsenic, barium, chromium, copper, lead, mercury, and nickel are not substantially higher downgradient than upgradient.” Vol. II at V.J.37. Were the polluted groundwater to enter an area of clean fill, one would almost certainly observe a decrease in the quality of the groundwater as it moved through that clean fill. The fact that the groundwater stays contaminated as it moves across (indeed, the average increases slightly over that distance) the Mission Bay site means that there are constant sources of contamination to the groundwater maintaining the levels of metals measured in it. Id (“the source of metals detections in groundwater appears to be related to the fill materials placed in Mission Bay South”). That contaminated fill extends all the way into Mission Creek and the Bay. Vol. II at V.J.36; V.J.6-8; Figure V.J.1.

The groundwater is very polluted with heavy metals. Despite the fact that the SEIR’s discussion of metals contamination of the groundwater at the site used an average of the data collected, the resulting numbers still show considerable cause for concern. Vol. II at V.J.45. If applied the maximum number available or the worst 90th percentile, likely would see exceedances of water quality standards even if the so-called attenuation were allowed to be factored in. In Mission Bay South, lead was measured as high as 370 ug/l with detections in 56 out of 105 samples (the water quality standard for lead is 5.6 ug/l). Copper was in 80 out of 105 samples with a high of 120 ug/l (standard for copper is 4.9 ug/l). Chromium had a high of 83 ug/l with detections in 80 out of 105 samples (the chromium standard is 11 ug/l). Nickel had the only perfect record with detections in 105 out of 105 samples with a high of 250 ug/l (water quality standard equals 7.1 ug/l). Zinc had a high of 700 ug/l with hits in 23 out of 105 samples (zinc standard is 58 ug/l). Lastly, mercury had a high of 1.5 ug/l with detections in 7 of 105 samples (standard for mercury is 0.25 ug/l). Although it is unclear what the SEIR is referring to when it says “chronic water quality criteria,” the SEIR states that, for Mission Bay North, mercury and nickel concentrations are above “chronic water quality criteria” by factors of 5.6 and 3.1 respectively. Vol II at V.J.45. For Mission Bay South, copper, lead, mercury and nickel are above “water quality criteria” by factors of 2.9, 9.2, 5.4 and 1.8 respectively. Id.

Consistent with its treatment of other concerns raised by accumulated data at this site, the SEIR then goes about attempting to explain away those high concentrations. In this instance, the SEIR turns to Catellus’ consultant’s computer model which purports to calculate an attenuation effect which is believed to occur in the last 50 foot of groundwater and soil before it discharges into the open Bay. As Regional Board staff admitted at a meeting with the Regional Board discussing the attenuation issue, attenuation at the Mission Bay site is another word for dilution by tidal action within the last 50 foot of soil. No dilution should be factored into the analysis. Once the contaminated groundwater hits that tidal area, albeit within the last 50 feet of fill, it is in the hydrologic system of the Bay. The damage is done.

In addition, other efforts to write off the groundwater contamination, including the binding capacity of Bay muds (the sediments in Mission Bay are extremely polluted), the claimed partial damming of groundwater flows by the transport structures adjacent to Mission Creek (where then does the water go?) and the oftly repeated fact that there is no one spot causing the metals contamination, do not address the significance of the described problem.

In any event, BayKeeper would not propose some kind of pump and treat program for the type of groundwater contamination being discussed. BayKeeper does believe that if in fact the groundwater is



building up to some extent behind the transports, that it could feasibly be pumped to a treatment wetlands constructed to mitigate storm water pollution and provide a perennial source of fresh water to help support that system. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

San Francisco Baykeeper is very concerned that the toxics in the soil, particularly metals, leached in through the groundwater into Mission Creek and San Francisco Bay.

Mission Creek is already considered the second highest -- the second hottest -- toxic hot spot in the Bay by the Regional Water Quality Control Board.

This site investigation and EIR dismisses the problem of metals in various ways, but in reality that has been almost all of the 105 groundwater samples. The maximum concentration that they found is 370 micrograms per liter. The effluent limits set by the Regional Board, 5.6. So it's less, 6,600 times the number. Copper is found in 80 of 105 samples, again at high levels. Nickel at 105, 105 of zinc and other -- 105

These metals are leaching through the groundwater into Mission Creek where people are fishing and into the Bay where fish live and people are fishing. (*Leslie Caplan, San Francisco Baykeeper*)

### **Response**

The comments express concerns that the SEIR underestimates the ecological impacts of metals in groundwater presently discharging into China Basin Channel and San Francisco Bay from the Project Area. The comments assert that evidence indicates the presence of constant sources of groundwater contamination at Mission Bay, and that testing indicates the groundwater is very polluted with heavy metals. Comments also raise questions about the effects on groundwater flow of the large box sewers that are located parallel to the north and south sides of the Channel.

Metals found in groundwater in the Project Area are appropriately considered background concentrations for the fill soils that comprise much of the Mission Bay Project Area; concentrations of metals in the groundwater remain essentially the same throughout the Project Area. Based on the tidal influence study performed by ENVIRON, concentrations of metals in groundwater near the Channel and Bay are expected to be attenuated by tidal fluctuations. As explained in the SEIR, the evaluation of existing ecological conditions shows that no unacceptable ecological risks result from the concentrations of metals in groundwater that is leaching into the Channel and the Bay. The transport/storage sewers that are located parallel to the edges of the Channel slow but do not stop groundwater flows, and so do not cause concentrations of metals in groundwater to increase or build up near the Channel edge. The ecological risk assessments used average concentrations of metals in groundwater based on samples from throughout the Project Area. The assessment approach is conservative, because the RWQCB's Water Quality Control Plan Water Quality Objectives, which were used as the basis for comparison, are designed to be compared to average concentrations at the point of exposure, that is, in the Bay and Channel, and not in the groundwater in Project Area soils.

Specific discussion is presented in the SEIR relating to site groundwater conditions and the effect of those conditions on China Basin Channel and the San Francisco Bay. General hydrogeologic conditions are discussed on pp. V.J.3-V.J.5, including discussion of groundwater and Channel/Bay water interaction. Discussion of groundwater conditions in Mission Bay North is presented on pp. V.J.20-V.J.22, and V.J.28-V.J.34. Discussion of groundwater conditions in Mission Bay South is presented on pp. V.J.34-V.J.41. The subsurface investigations completed by ENVIRON throughout the Mission Bay Project Area are summarized in the SEIR on the pages noted above, are cited in endnotes to Section V.J, Contaminated Soils and Groundwater, and are available for public review at Planning Department offices.

adequacy and validity of ENVIRON's studies, including study of groundwater impacts on marine ecosystems, were confirmed by an independent credentialed environmental scientist, Dr. Martha Kohler, retained by the Mission Bay Citizens Advisory Committee (CAC). Dr. Kohler's concurrence with the study of chemicals in soil and groundwater in the Project Area was presented at the public hearing on the Draft SEIR held on May 12, 1998, before the San Francisco Redevelopment Agency and the City Planning Commission, as stated by Corinne Woods, Chair of the Toxic Subcommittee of the Mission Bay CAC. Additionally, the Regional Water Quality Control Board (RWQCB) in its Resolution No. 98-044 found that the Project Area's investigation of soil and groundwater was satisfactory and complete. Support for the adequacy of the review effort was provided by the California Department of Toxic Substance Control (DTSC) and the San Francisco Department of Public Health, both of which acted with the RWQCB in consultative work groups concurring that the studies were adequate and complete. In conclusion, the environmental evaluation presented in the SEIR thoroughly and adequately describes the existing setting, including the potential impacts that may be occurring, and that may occur with the project, from the flow of groundwater from the Project Area into China Basin Channel and San Francisco Bay.

The occurrence and significance of metals in both soil and groundwater in the Project Area were presented and discussed in the SEIR on pp. V.J.20-V.J.41 and V.J.45-V.J.46. Discussion of attenuation (reduction) of metals concentrations in groundwater as the groundwater approaches China Basin Channel and San Francisco Bay was presented on pp. V.J.3 and V.J.4 of the SEIR. The lack of ecological impact was discussed on pp. V.J.45-V.J.46. It is important to understand the approach to analysis of attenuation in order to understand what concentrations of metals in groundwater actually enter the marine ecosystem and whether they could potentially create an adverse impact. The attenuation process was further explained in a May 12, 1998 letter submitted to the RWQCB by ENVIRON prior to the Board's adoption of Resolution No. 98-044 on May 20. In the RWQCB staff report in support of the proposed resolution, the RWQCB staff concurred with the ENVIRON evaluation and findings regarding metals occurrence, migration, attenuation, and lack of ecological



impact. The Board, in its Resolution No. 98-044, formally concurred with its staff and with the public agencies that make up the Consultative Work Group (mainly the California Department of Toxic Substances Control and the San Francisco Department of Public Health). Dr. Martha Kohler, technical consultant for the Mission Bay CAC, also concurred that the evaluation of ecological impacts was adequate and supported the conclusion that there were no unacceptable ecological risks posed by the migration of dissolved metals in groundwater as it flows into China Basin Channel or San Francisco Bay, as noted above.

The following text is from ENVIRON's May 12, 1998 letter to the RWQCB regarding the same issues raised by comments on the Draft SEIR. It elaborates on the information and conclusions presented in the Draft SEIR.

BayKeeper's position appears to stem from a misunderstanding about the attenuation of metals in ground water at Mission Bay. The reduction (or attenuation) of metals concentration as the ground water moves across the Site must be distinguished from the reduction (or attenuation) of metals concentration in ground water adjacent to the Bay. First, contrary to BayKeeper's assertion, the metals detected in the fill soils at the Mission Bay Project Area represent background concentrations for fill soils at the Mission Bay Project Area. Background concentrations for metals in fill soils at the Project Area are elevated for nine of the metals analyzed when compared to background metals concentrations reported for native California soils as presented by Dragun and Chiasson (1991). [Citation is to Dragun, James and Andrew Chiasson, *Elements in North American Soils*, Hazardous Materials Central Resources Institute, 1991.] However, native California soils do not represent background conditions for fill soils at the Project Area. Background metal concentrations for the Mission Bay Project Area reflect the origins of Mission Bay fill soils. The fill soils at the Mission Bay Project Area come from debris from the 1906 San Francisco earthquake, dumping operations conducted by the City of San Francisco at the turn of the century, and transfer of soils from various other parts of San Francisco during its early stages of development. Metals within fill materials of the Mission Bay Project Area illustrate no particular geographic pattern of occurrence and are widely detected, both which support the conclusion that metals within the fill soils are likely associated with the composition of the fill resulting from the history of the Site's development and use. The observation that nine of the metals being detected within Mission Bay Project Area fill soils are elevated relative to native soils is worth noting but the observation does not change the central conclusion that metal occurrences within fill soils at the Project Area are a background phenomenon.<sup>2</sup>

Second, contrary to BayKeeper's assumptions, metal concentrations in ground water that flows through the fill materials of the Project Area stay essentially the same across the Project Area. The constant metal concentrations in ground water that flows across the Project

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2. BayKeeper's comparison of certain detected metals concentrations to hazardous waste regulatory limits (e.g., the "WET Test") is relevant only for Maher Ordinance [San Francisco Public Works Code, Article 20] compliance and potential offsite movement of soil. The relevant standards to determine ecological impact are the RWQCB's Water Quality Objectives.

Area suggest that there is no significant contribution of metals to ground water from a major source area within the Project Area and no net gain of dissolved metals as ground water flows across the Project Area. As presented in ENVIRON's investigation reports (ENVIRON 1997, 1998a, 1998c), metal concentrations in ground water do not become lower as water flows across the Project Area. [Citations are to the ENVIRON 1997 Mission Bay North Report cited in SEIR end note 4 on p. V.J.100, the 1998 Mission Bay South Report cited in SEIR endnote 2, on p. V.J.100; and Technical Memorandum No. 3 cited in SEIR endnote 5, on p. V.J.100.] This is because the ground water is in constant contact with the fill materials, which are the source of the metals being detected in the ground water. The pattern of metals detected in ground water at the Project Area indicates that the origin of the metals in ground water is the ubiquitous fill materials through which the ground water must flow at the Site. Conversely, if the source of metals in ground water were an isolated source area (or several isolated source areas), metal concentrations would decrease as water flowed away from that isolated source area(s). This pattern is not observed within the Project Area, indicating that the origin of metals in ground water is the desorption of metals from fill materials that cover the Project Area.

Third, the critical issue is whether the metals concentrations in ground water are attenuated (reduced) sufficiently as the ground water approaches China Basin Channel and the San Francisco Bay. The answer to that question is yes. This attenuation is caused by tidal fluctuations within each of these surface water bodies and occurs solely within the ground water system before the ground water enters the Channel or the Bay. The tidal influenced attenuation process has been described in detail in the Site Investigation and Risk Report, Mission Bay South of Channel (ENVIRON 1998a) and in Technical Memorandum #3, North of Channel Screening-Level Ecological Risk Evaluation, Mission Bay Project Area (ENVIRON 1998c). [Citations are to 1998 Mission Bay South Report cited in endnote 2 on p. V.J.100 in the SEIR, and to Technical Memorandum No. 3 cited in endnote 5 on p. V.J.100.]

Quantification of the attenuation of metals in the ground water as ground water approaches the China Basin Channel and the Bay was completed using a published and peer-reviewed predictive model. The peer-reviewed, predictive model simulates how the tidal fluctuations in a surface water body, like the Bay or China Basin Channel, cause water elevations within the adjacent ground water systems to rise and fall resulting in the attenuation and reduction of ground water chemical concentrations through processes of dilution, dispersion and sorption. Depending on the permeability of the adjacent ground water system, the tidal effect will extend from a few tens of feet to over a hundred feet inland from the shoreline. As the surface water levels rise, water flows into the channel bank causing ground water levels to also rise. When surface water levels then decline, water stored in the channel bank drains back to the surface water body.

This process substantially reduces the concentration of chemical constituents in the ground water before the ground water enters the Bay or Channel. The interaction of surface water with the ground water system occurs in the area where the tidal influence is pronounced. For the type of soils present at the Mission Bay Project Area, this includes areas within 50 feet of the shoreline.<sup>3</sup> The quantification of the attenuation as ground water approaches the San Francisco Bay and the China Basin Channel was estimated on a one-dimensional basis and is conservative because it does not allow for lateral dispersion, dilution



or sorption that occur in a three-dimensional system. If full three-dimensional mixing and attenuation were taken into account, the attenuation factor and the associated reductions in ground water chemical concentrations would be greater than the ten-fold reduction obtained.

In short, none of the discharge concentrations of metals in ground water at the Mission Bay Project Area evaluated by ENVIRON exceed any Water Quality Objective (CRWQCB 1995) at either the China Basin Channel or the Bay and the metals concentrations in ground water do not pose a threat to the aquatic ecosystem. [Citation is to the RWQCB 1995 Water Quality Control Plan, San Francisco Bay Plan (Region 2).] The comparison of discharge concentrations to Water Quality Objectives was done without taking any dilution within the receiving water body into account.

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3. In the North of Channel Area, soils are less permeable adjacent to China Basin Channel which results in tidal fluctuations occurring less far inland, thereby causing the attenuation process to occur closer to the shoreline than in areas with higher permeable soils.

As stated on p. V.J.3, groundwater flows from the Project Area into China Basin Channel. This occurs both north and south of the Channel. The transport/storage sewers are described on pp. V.J.4-V.J.5, where the SEIR states that these large sewers appear to impede the flow of groundwater to China Basin Channel. The presence of the sewers on the north and south sides of China Basin Channel appear to impede the flow of groundwater because of their large size and their close proximity to the sides of the Channel. Although the groundwater flow is impeded by these structures, the flow is not stopped. Rather, the groundwater flows around the structures, which merely increases the time that it takes for groundwater to reach China Basin Channel from the Project Area. As stated in the SEIR, since the box sewers impede, or slow, the movement of the groundwater to the China Basin Channel but do not stop the flow, they do not appear to play a role in reducing the concentration of chemicals in the groundwater (pp. V.J.4-V.J.5).

The SEIR does not state that there is a "build up of groundwater" behind the large sewers. Groundwater elevations in wells in the Mission Bay North area are no more than 1 foot different in wells adjacent to and on either side of the sewer. The lack of a marked difference in water levels on either side of the sewer indicates that a "build up" is not occurring. These data were presented in ENVIRON's 1997 study of the North of Channel Area./8/ In the Mission Bay South area, wells exist only on the upgradient side of the box sewer. Water level elevations in the wells directly upgradient of the box sewer south of the Channel had measured water levels that were no more than 1 foot above mean sea level as shown in Figure 4-1 of ENVIRON's 1998 study of the South of Channel area./9/ Groundwater elevations on the upgradient side of the sewer are so close to mean sea level that there is no support for a conclusion that a "build up" of groundwater is occurring behind the box sewer south of the Channel.

Although the structures appear to slow the general flow of groundwater, this does not result in any type of hydraulic “build up” behind them, because the groundwater finds other ways around and under the sewers. Consequently, no pumping of this water is necessary or appropriate.

The text on p. V.J.4, in the next-to-last sentence in the last paragraph, has been revised to clarify this issue, as follows:

**These box sewers appear to impede or slow the general flow of groundwater toward the Channel by reducing the amount of groundwater that enters the area between the box sewers and the Channel edge; they do not stop the flow, rather, groundwater flows around the sewers to the Channel.**

The comment seems to be concerned that the ecological risk assessment evaluated risks to aquatic organisms based on a comparison of the average concentration of metals in the groundwater to the water quality standards instead of using the maximum values, or the worst 90th percentile of the data. In situations when there is very little monitoring data, the use of either the maximum or 90th percentile of the distribution might be a reasonable approach. This would build an added level of conservatism into the assessment that would be appropriate under those situations, because a limited data set would be insufficient to provide an understanding of the levels of chemicals that may actually be present and to which the aquatic organisms might be exposed.

In designing the sampling approach for the Project Area, however, enough samples were collected to provide reasonable understanding of the source of the metals, and the levels to which organisms could be exposed. Because of the large data set for the Project Area, and the indications from the data that the source of the metals in the groundwater is the fill material, the average concentration was deemed to be a more accurate estimate of the concentrations to which the organisms in the China Basin Channel and San Francisco Bay may be exposed. This analysis is sufficiently conservative even when based on the average concentration because: 1) the large data set for the Project Area provides a solid foundation for understanding the levels of chemicals that may actually be entering the China Basin Channel and the San Francisco Bay; 2) the RWQCB Water Quality Control Plan Water Quality Objectives (WQOs) to which the comparisons are made are designed for comparison against average chemical concentrations; and 3) the WQOs are designed for comparison to chemical concentrations at the points of exposure, in the Bay or Channel, not in the ground water. Had an evaluation of these potential impacts been necessary with a limited understanding of the levels of metals in the groundwater, there would have been few options other than relying on more conservative estimates of the potential exposure concentrations.



The “chronic water quality criteria” referred to in the comment that are used in the ecological risk evaluation are the chronic water quality objectives published in the RWQCB’s Water Quality Control Plan for the San Francisco Bay (known as the “Basin Plan”). A discussion of the WQOs used in the ecological risk evaluation is provided in Appendix I on p. I.57.

A discussion of the Channel’s potential designation by the RWQCB as a toxic hot spot is provided in responses in Hydrology and Water Quality, under “Designation of China Basin Channel and Islais Creek as Toxic Hot Spots,” on pp. XII.327-XII.333.

#### Permeable Surfaces Post Development

##### *Comments*

Section II, Page II.25, Long-Term Occupancy (Post-Development), paragraph 1, sentence 3. This sentence is unclear in that landscaping is generally not considered a “partially impermeable surface.” (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)

To the extent some environmental concerns relating to storm water and CSOs would include mitigations involving permeable surfaces throughout the Mission Bay project, a potential conflict exists between the asserted health risk benefits of “permeable and partially impermeable surfaces” and potential benefits of permeable areas in order to mitigate overflows and storm water pollution discharges. Because the mitigation measures are not specified, no way to seriously discuss the extent of permeable surfaces. Vol. I at II.25. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

##### *Response*

Comments request clarification of the term “impermeable or partially impermeable surface” in Chapter II, Summary, because landscaping is generally not considered a “partially impermeable surface.”

After development is complete, the Project Area would be covered by buildings, structures, parking areas, roadways and parks and landscaping. This description of the post-development conditions is provided on p. V.J.86. The areas that would be landscaped would not consist of either “impermeable or partially impermeable surfaces,” as was stated in the Draft SEIR’s Summary on p. II.25. Survival of the plants/grass in the landscaped areas requires some permeable surface so that the plants can receive water. The landscaped areas, however, would be covered with imported fill before landscape plants are installed; the minimum depth of the fill that would be required in the landscaped areas, and the specific standards for the fill would be determined at a later date, and will be delineated in the RMP. The post-development conditions, therefore, would consist of both impermeable and permeable surfaces. The third sentence in the first paragraph on p. II.25 has been revised to read as follows:

**After development, currently exposed soils would be covered by buildings or other surfaces such as parking lots or roadways ~~or other impermeable or partially impermeable surfaces (e.g., landscaping), or would be open space or landscaped areas, and any exposed soils would consist of imported fill meeting RWQCB approved specifications.~~**

The critical conceptual issue is that after development of the Project Area is complete, all currently exposed native soils would be covered so that people would not come into direct contact with the native soils. The health benefit of the post-development conditions results from the fact that future conditions would preclude direct contact with currently exposed native soils, not from any distinctions between whether the cover would be permeable or impermeable. For all practical purposes, a cover that is permeable, as would exist in the landscaped areas, would provide the same benefit to people and to birds and wildlife as a cover that is impermeable, because both would be effective in eliminating the potential for direct human contact with native soil.

Page II.25 does not discuss the use of permeable areas for stormwater overflows. The SEIR notes in the discussion of alternative wastewater treatment technologies on p.V.K.28 that stormwater infiltration would have limited utility because groundwater levels are relatively high in the Project Area, leaving limited ability to accept stormwater.

## **Soil and Groundwater Mitigation Measures**

### ***Comments***

As a result of Dr. Kohler's review, and information provided by Steve Morse, Chief of the Toxics Cleanup Division of the RWQCB, the Mission Bay CAC:

1. Strongly urges that Mitigation Measures outlined in the DEIR for Contaminated Soils and Groundwater (J.1 - J.2) be accepted and implemented as soon as Risk Management Plan(s) (RMP) are approved by RWQCB. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

As a result of Dr. Kohler's review and information provided by Steve Morse, chief of the toxics cleanup division of the Regional Board, the toxic subcommittee and CAC recommend that mitigation measures outlined in the EIR for contaminated soils and groundwater in Section J, items J-1 through J-2, be accepted and implemented as soon as risk management plans are approved by the Regional Board. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### ***Response***

As stated on p. VI.41 in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, the project analysis assumes that a Risk Management Plan or Plans would be prepared for the Project Area. The project features listed under Measures J.1 and J.2 are included in the project. As noted



on pp. XII.210-XII.213, under “Public Review and Comment on RMPs,” no schedule has been established for RWQCB staff approval of the RMP or RWQCB consideration of a Certificate of Completion. Timing of implementation of the features in the RMP would depend on the kinds of activities being undertaken in the Project Area. The pre-development features listed in Measures J.1b and J.1c would take place after the RMP is approved by RWQCB staff and prior to development. The RWQCB has indicated that to obtain a Certificate of Completion, the RMP or RMPs must be approved by staff and deed restrictions recorded. Once recorded, the owner would be obligated to comply with the deed restrictions, including any applicable RMP measures. Features of the project included in Measures J.1i - J.1o would be applicable following build-out of the entire Project Area.

#### Mitigation for Avian and Aquatic Environment

##### ***Comments***

As a result of Dr. Kohler’s review, and information provided by Steve Morse, Chief of the Toxics Cleanup Division of the RWQCB, the Mission Bay CAC: . . .

4. In conjunction with China Basin Channel Vegetation and Wildlife Mitigation Measures L.1 - L.6, would like mitigation measures to ensure that RMPs protect the avian and aquatic environment and assist with successful establishment of native wetland salt marsh vegetation. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

And in conjunction with the China Basin Channel vegetation and wildlife mitigation measures, L-1 through L-6, we want to ensure the risk management plans protect the avian and aquatic environment and assist with successful establishment of native wetland salt marsh vegetation. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

##### ***Response***

The comments request that there be mitigation measures to ensure that the Risk Management Plan or Plans (RMP) protect wetland salt marsh vegetation, and avian and aquatic species in water bodies near the Project Area.

Vegetation and Wildlife Mitigation Measures L.1 and L.2 address wetland salt marsh habitat mitigation. Restoration of salt marsh habitat is not the primary intent of the Risk Management Plan or Plans (RMP); however, several of the RMP features to be implemented as part of pre-development, development (construction), and post-development actions, and listed in J.1a through J.1o in “Project Features That Avoid Significant Impacts” included in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, would provide controls that would help achieve and maintain the successful establishment of native wetland salt marsh vegetation. For example, as indicated in J.1g and J.1h, controls would be in place during construction and occupancy to manage surface runoff and groundwater to minimize the potential, if any, to be discharged to the ground or to

surface water within the Project Area. These controls would protect any salt marsh habitat. During construction, dust controls would be implemented (J.1f) to limit the levels of fugitive dust so that human and ecological populations would not be adversely affected by contaminants in dust. After development, areas where uncovered soils previously existed would be covered by buildings or other surfaces such as parking areas and roadways, or by open space and landscaping (Measure J.1i). In addition, prohibitions on the use of shallow groundwater, limitations on residential access to soil, and establishment of protocols for subsurface maintenance work, construction, or repair (J.1m-J.1o) would effectively preclude actions that could result in the inadvertent release of contaminated soil or discharge of groundwater or surface water to locations where it could adversely affect wetland salt marsh habitat mitigation efforts. Thus, the RMPs would provide the necessary controls that would work in conjunction with Mitigation Measures L.1 and L.2 to ensure that the salt marsh mitigation efforts would be successful. No modification of the "Project Features That Avoid Significant Impacts" J.1a through J.1o or additional mitigation would be necessary.

Vegetation and Wildlife Mitigation Measures L.3 through L.6 were developed to reduce potential impacts on certain aquatic species in China Basin Channel (or, with respect to Pacific herring, in San Francisco Bay) as a result of increased turbidity due to construction activities within the water body (as opposed to construction on land). The need for mitigation during construction was not identified for avian species because there would be no significant impacts, as discussed in Section V.L, Vegetation and Wildlife, and as further noted on p. V.J.72. (See also the response under "Construction Dust Effects," on pp. XII.209-XII.210.)

The analysis of potential construction-related soil and groundwater contamination impacts on avian and aquatic species assumes that the RMP would be implemented during and after development (p. V.J.59). As further stated on p. V.J.64, the RMP would reduce exposure of people, terrestrial, *avian, and aquatic* [emphasis added] organisms to potential construction-related effects. Additional mitigation beyond that assumed as part of the project is not determined necessary because the project features described in the SEIR adequately address significant impacts. To ensure that contaminants from the project site would not enter China Basin Channel or San Francisco Bay (where they could adversely affect the aquatic community) or otherwise affect onshore or offshore avian species, the RMP includes a number of measures (described above) that would reduce the potential for dust and runoff that could contain contaminants from entering these water bodies or from being carried to other locations where aquatic or avian species could be exposed to the contaminants. Therefore, the RMP would protect avian and aquatic species during construction, as suggested in the comments.



## Dust Control

### **Comments**

Page VI.44, Item J.lf.v. Please specify the applicable Bay Area Air Quality Management District criteria and/or standards which must be met.

Page VI.44, Item J.lf.v. Please specify the source of the 250 ug/m<sup>3</sup> value above which additional dust control measures would need to be implemented. Please also specify where this value would be applied (e.g., in the construction zone, at the downgradient boundary of the specific construction project, at the property line of the nearest occupant). (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)

In addition to the wildlife, we are concerned about the health of the human species living on Mission Creek, and feel that substantial dust control measures are appropriate and should be incorporated in the mitigation measures for Mission Bay. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### **Response**

The comments request additional information and clarification of information pertaining to the dust control measures.

The SEIR discusses the effects of construction-generated dust on pp. V.J.68-V.J.73. Information in the SEIR is based on various background reports and health risk assessments prepared for the project. Health risks were discussed for humans and for the ecological environment, including terrestrial wildlife and aquatic environments.

A detailed description of human health risk assessment procedures and assumptions is presented in Appendix I, Contaminated Soils and Groundwater. As described on p. I.63, the assumption that nearby populations would be exposed to off-site dust concentrations of 250 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) was based on several conservative assumptions. First, each receptor was assumed to be exposed for a 20-year construction period, longer than the approximately 17-year buildout period through 2015. Second, the on-site dust concentration directly within the construction zone during dust-creating activities was assumed to be 1000  $\mu\text{g}/\text{m}^3$  based on a review of scientific literature and on recommendations from the Department of Toxic Substances Control. Dust-generating construction activities were assumed to occur for 25 percent of the total construction period; that is, during construction of a building, it was assumed that for 25 percent of the time equipment would be grading, excavating, or otherwise disturbing the soil on the site. Thus, the average level of PM<sub>10</sub> in ambient air to which nearby residents (defined as populations directly adjacent to the construction zone) would be exposed each year, for a 20-year period was assumed to be 250  $\mu\text{g}/\text{m}^3$ . As explained

on pp. I.63-I.64, this value is considered to be extremely conservative; the actual concentrations to which an individual could be exposed would likely be much lower. The dust monitoring plan, therefore, would be devised to verify that dust levels to which nearby receptors could be exposed remain below  $250 \mu\text{g}/\text{m}^3$ .

As described on p. V.J.51, the applicable BAAQMD standard which would apply to construction dust is Regulation 6-305 which prohibits visible particles from annoying off-site individuals. In addition to this regulation, the BAAQMD CEQA guidelines recommend dust control measures which should be implemented to prevent significant air quality impacts./10/ These dust control measures are included as project features in Measure F.2, on p. VI.33. The dust control measures listed in Measure F.2 would protect human and ecological health and minimize construction dust impacts on the surrounding environment.

In addition to the mitigation measure for construction generated dust, the SEIR includes Measure J.1c which would minimize dust impacts prior to development of the site (see p. VI.42), if necessary. This project feature establishes interim risk management measures to reduce potential contamination-related risks to Project Area occupants and visitors from undeveloped sites during build-out. In particular, J.1c.ii, calling for use of hydroseeding or other vegetative cover to be applied to uncovered areas, is intended to reduce windblown dusts from these sites if it is determined that chemicals present in dust blowing from uncovered areas represent an unacceptable risk to human populations.

The analysis in the SEIR determined that any potentially significant dust impacts from chemicals present at undeveloped sites would be effectively mitigated through the risk management measures identified in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, on pp. VI.42-VI.43. These measures include periodic inspection to verify that risk management measures such as fencing and vegetative cover remain in place.

#### CalOSHA Requirements

##### *Comment*

Page VI.43, Development, J.1d. The RMP should require compliance with Cal/OSHA regulations rather than including them in the RMP as objectives. (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)



### ***Response***

Regardless of whether the RMP calls for including Cal/OSHA compliance as an objective or a requirement, OSHA regulations would be applicable to development activities in the Project Area. The intent of Measure J.1d was to include health protection for construction workers who may come into contact with chemicals in soil or groundwater, particularly as-yet unidentified chemicals in soils under existing buildings or near sites of unidentified old or abandoned underground storage tanks, as discussed on p. V.J.80. The mention of Cal/OSHA worker safety regulations in Measure J.1d is merely to acknowledge the applicability of these requirements.

### **UCSF and Article 20 of San Francisco Public Works Code**

### ***Comment***

Page II.25, section II, Paragraph 2 [p. II.24, last paragraph, in the Final SEIR] and Page V.I.3, Paragraph 2. Please clarify whether UCSF is subject to the Maher Ordinance as the first sentence states that UCSF is subject to state and federal regulations, but not local regulations, except where state and federal agencies have specifically delegated oversight authority to local agencies. Compliance with the Maher Ordinance requirements is being used to ensure that the areas impacted by a proposed development project within the Mission Bay project area have been sufficiently investigated, evaluated and addressed. The investigation conducted to date is sufficient to provide general information about the project area. (*Barbara J. Cook, P.E., Chief, Northern California - Coastal Cleanup Operations Branch, Department of Toxic Substances Control, California Environmental Protection Agency*)

### ***Response***

Article 20 of the San Francisco Public Works Code is discussed on p. V.J.51, under “Regulatory Framework.” As noted there, in designated areas, applicants for San Francisco building permits for which construction activities would involve disturbance of 50 cubic yards of soil must carry out assessments of the soil for the presence of hazardous waste, and where hazardous wastes are found, must prepare and implement a site mitigation plan. The Regional Water Quality Control Board, in adopting Resolution No. 98-044, called for the RMP(s) to include a framework for coordinating Article 20 compliance with other parts of the RMP.

Although UCSF, as a state agency, would not obtain building permits from the San Francisco Department of Building Inspection and thus is not subject to Article 20, the land transfer agreements between Catellus and UCSF indicate that UCSF would abide by city procedures that are applicable to Catellus related to chemicals in the soil and any necessary remediation./11/ The agreement includes provisions that call for Catellus to carry out the requirements of the Risk Management Plan related to pre-development or remediation activities and the requirements of Article 20. Article 20 requirements could include preparation of site history reports, soil and groundwater sampling and chemical analyses, review with the San Francisco Department of Public Health of any proposed remediation

plan, and execution of any remediation actions called for in a remediation plan based on the results of the tests, prior to transferring parcels to UCSF.

Except for tasks reserved to Catellus, provisions in a remediation plan prepared pursuant to a provision of the RMP related to construction activities would be carried out by UCSF or its construction contractors, and UCSF would be responsible for implementing the Health and Safety Plan and all post-construction measures specified in the RMP. Catellus would be responsible for implementing measures required by the approved RMP that are to be implemented before or during construction at initial permanent buildings, any ongoing or continued soil or groundwater treatment and groundwater monitoring required to obtain RWQCB final site clearance to comply with the RMP extending into the post-construction period, and related ongoing government oversight. In addition, UCSF has adopted measures such as the dust control measures recommended by the BAAQMD in its Long Range Development Plan FEIR which are the same as or similar to those listed in Measure F.2 on p. VI.33.

If UCSF were to request early transfers of land from Catellus, UCSF has agreed that it would be primarily responsible for complying with the provisions of the RMP and therefore with the requirements of Article 20 incorporated into the RMP, with certain exceptions that will remain the responsibility of Catellus.

As noted in earlier responses, under "Public Review and Comment on RMPs," on pp. XII.210-XII.213 the Regional Water Quality Control Board adopted Resolution 98-044, endorsing staff recommendations that include a requirement to provide a framework for Article 20 compliance in the RMP. Although UCSF would generally be exempt from the provisions of local ordinances like Article 20, as a property owner UCSF would be subject to recorded deed restrictions incorporating provisions of the RMP, enforced by the RWQCB, that would include implementation of Article 20. This mechanism, along with the contractual agreements between Catellus and UCSF, would ensure compliance with the Maher Ordinance on the UCSF site in Mission Bay.

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NOTES: Contaminated Soils and Groundwater

1. ENVIRON International Corporation, *Technical Memorandum #1, Approach to a Plan for Risk Management, Mission Bay Project Area*, April 1998, Section 6.2.1.1, page 6-4.
2. ENVIRON International Corporation, *Site Investigation and Risk Evaluation Report, Mission Bay South of Channel, San Francisco, California*, April 1998.



3. ENVIRON International Corporation, *Site Investigation and Risk Evaluation Report, Mission Bay South of Channel, San Francisco, California*, April 1998, Appendix F, p. F-23.
4. Department of Toxic Substances Control, *Supplemental Guidance for Human Health Multimedia Risk Assessments for Hazardous Waste Sites and Permitted Facilities*, Sacramento, California. July 1992.
5. U.S. Environmental Protection Agency, *Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual (Part A). Interim Final*, Office of Emergency and Remedial Response, EPA/540/1-89/002, Washington, D.C. December 1989.
6. Vic Pal, RWQCB staff, telephone conversation with ENVIRON Corporation, July 14 1998.
7. Regional Water Quality Control Board, Resolution 98-044, paragraph 5, adopted May 20, 1998.
8. ENVIRON International Corporation, *Results of Investigation, Mission Bay North of Channel*, April 1997, pp. 3-2 to 3-3, Section 3.1.2.
9. ENVIRON International Corporation, *Site Investigation and Risk Evaluation Report, Mission Bay South of Channel*, February 1998, Figure 4-1 and Section 4.1.2, pp. 4-2 to 4-3.
10. Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines*, 1996, p. 27.
11. Michelle Schaefer, Environmental Coordinator, University of California San Francisco, telephone conversation with EIP Associates, July 14, 1998.

## HYDROLOGY AND WATER QUALITY

### Background Regarding Existing Combined Sewer System

#### *Comments*

Comment #1: Require Further Investigation on Environmental Impact Prior to Making a Decision on the Sewer System and Its Impact on Water Pollution in the Bay.

BAOC has concerns that the proposed wastewater plan for Mission Bay will overload the City's sewer system and pollute Bay waters. The Southeast Treatment Plant is already strained. To add more wastewater and sewage to this plant would result in overflow into the Bay. This could cause great environmental damage. (*Joe Beresford, Chair, Homeownership Committee, Bay Area Organizing Committee; St. Theresa Church*)

We are also concerned about the cumulative effects from the cumulative, massive development on the City's bayside, on generating a renewed call for the Crosstown Tunnel as a way of mitigating the problems generated by the "Bayside Discharges." We are therefore very interested in seeing a full-fledged cumulative study of the impacts of these projects.

We see the cumulative development as a critical opportunity for the City to reduce wastewater impacts to Bayview/Hunters Point and the Bay, improve the Bayside waterfront, advance the City's use of reclaimed water, move towards the City's goals for sustainability, and by doing so obviate a later call for the Crosstown Tunnel, and make good on its 25 year promise to alleviate the negative impacts of the wastewater system on Bayview/Hunters Point. We are very concerned that this unprecedented opportunity for both the city & developers will be built over. . .

We believe, as stated above, that this SEIR has taken a seriously shortsighted and inadequate view of the longer-term impacts of this project, vis-a-vis cumulative impacts, the environmental justice issue, impending regulations, the longer term costs of having to react to these pressures, by building more expensive "centralized infrastructure later to take care of problems that the City is planning to add to now. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

Pages V.K.18 and 19 of the Draft EIR explain the NPDES permits regulating the Southeast and North Point plants. As noted in the text, the RWQCB has found that it would be acceptable to allow for specific numbers of CSOs over a ten year period along three separate areas of the Bay shore [and] the City has just completed a series of improvements intended to meet these criteria. The Draft EIR concludes that because the improvements have been completed, the City is now in compliance with the permit requirements. This is a specious argument, in that there is insufficient data to determine whether the improvements will function as intended. Given that the permits allow a certain number of CSOs averaged over a ten year period, it will be impossible to know if the City is in compliance with the permits until ten years have gone by. In the meantime, it should be assumed that CSOs are still a critical issue in the Bayside treatment system, and the City should implement all available measures to avoid them. (*Kate White, Program Director, Urban Ecology, Inc.*)



### *Response*

Issues raised in the comments above, and other comments regarding “Wet-Weather NPDES Permit” (pp. XII.371-XII.376), “Reductions in Combined Sewer Overflow Volumes” (pp. XII.295-XII.298), “Sewer Flooding” (pp. XII.392-XII.394), and “Odors” (pp. XII.394-XII.396) include the completeness and adequacy of the overall combined sewer system, the adequacy of sewer capacity, the legitimacy of the long-term annual average overflow numbers, the number of allowed combined sewer overflows (CSOs) and their impacts on beneficial uses, and alleged exemptions from various water quality standards. These issues were thoroughly discussed and addressed during the approximately 25-year design and construction process for the City’s wastewater system.

The SEIR provides information about the City’s existing combined sewer system and its National Pollutant Discharge Elimination System (NPDES) permits to the extent that they apply to water quality changes caused by the project. The project would increase dry-weather sanitary flow and stormwater through the existing combined sewer system by a relatively small amount, but would not physically change the system other than replacing and upgrading existing sewer lines or constructing new lines, as described in the SEIR. The project also does not propose any physical changes to the Southeast Water Pollution Control Plant. For these reasons, only the incremental changes caused by the project with respect to receiving water quality are considered in the SEIR. While not required for analysis of the project’s impacts, it is useful as background for responses to these and other comments on the SEIR to have an understanding of the existing City system and of the steps taken by the City to improve sewage treatment over the past 25 years.

Until the City began implementing its Wastewater Master Plan, adopted in 1974 and amended numerous times since, the sewage conveyance and treatment system consisted of a system of “combined” sewers that conveyed combined sanitary flows and rainwater runoff to three sewage treatment plants providing primary treatment for all dry-weather (sanitary sewage) flows and discharging primary-treated effluent to the Bay or Ocean. During rainy weather, the volumes of combined flows were too great for the treatment plants to handle; therefore untreated (“raw”), but diluted, sewage overflowed from about 43 points around the City into the Bay and Ocean. These overflows occurred an average of about 40 to 80 times per year.

The Wastewater Master Plan was developed during 1968-1974 in response to Regional Water Quality Control Board (RWQCB) resolutions and orders requiring the City to improve its wastewater collection and treatment system (Resolutions No. 67-64, 69-43 and 69-44; Orders No. 72-90 and 72-91). Studies for the Wastewater Master Plan began in 1968 and encompassed a range of options for conveying and treating the City’s combined sanitary sewage and stormwater runoff. As described in the 1974 EIR/EIS analyzing the impacts of the then-selected program, the main alternatives considered

included: constructing fully separated sanitary and stormwater collection systems; improving treatment processes at, and expanding, the three existing water pollution control plants; constructing additional treatment plants at each of the then-existing overflow points or at locations combining flows from several overflow points; constructing a single, regional treatment plant to serve the entire combined citywide flows; and providing additional treatment with use of the reclaimed water for landscape irrigation./1/ These alternatives were evaluated in the EIR/EIS; all except the single regional treatment plant were found to have significant construction and operational impacts and were rated less environmentally acceptable than the Wastewater Master Plan alternative./2/ For example, the multiple individual treatment plants would be difficult to staff and operate on an intermittent basis, which could cause odor and noise problems at each location. Constructing separated sanitary and stormwater collection systems would disrupt every street in the City and would not provide any treatment for stormwater flows./3/

San Francisco adopted a Wastewater Master Plan in 1974 to improve its combined sewer system and the quality of its discharges. This plan proposed a series of improvements and additions to San Francisco's sewage treatment, transport, and disposal capacity to bring the City into regulatory compliance by greatly reducing the number of CSOs and increasing the water quality of CSOs compared to pre-1974 conditions. The resulting Wastewater Master Plan included about 45 retention basins located throughout the City to store wastewater and regulate flows to two treatment plants, upgrading the existing Southeast Treatment Plant to provide secondary treatment for dry-weather flows and portions of the wet-weather combined flows, and a new 1,000-million-gallon-per-day (mgd) capacity plant on the Ocean side of the City, to treat all remaining citywide flows. All treated effluent from the Southeast Plant and all untreated combined flows from the east side of the City were to be transported to the west side through a crosstown tunnel, with disposal of all treated flows to the Ocean, two to four miles from shore. The original Wastewater Master Plan proposed a system to limit the number of overflows to an average of about eight per year.

Because the Wastewater Master Plan was intended to be implemented over a period of at least 20 years, it was a general concept that provided for modification in response to changing circumstances. This Master Plan has been refined over time, as individual components were studied. The main changes that occurred between 1974 and about 1984 in the overall planning were to reject the retention basin storage reservoirs and replace them with transport/storage sewers with baffles and weirs providing flow-through treatment for CSOs, and to reduce substantially the planned 1,000-mgd-capacity of the westside treatment plant while retaining sufficient capacity to treat all dry-weather flows and to store and treat large enough volumes of wet-weather combined flows to limit CSOs on the west side of the City to a long-term average of 8 or fewer per year. Also during this time, funding cutbacks, new information about treatment of wet-weather flows in the transport/storage facilities, and review by



regulatory agencies caused the City to delay construction of the Crosstown Tunnel and focus on completing east side and west side storage and treatment facilities that would provide secondary treatment to dry-weather flows and provide storage to operate a system intended to reduce CSOs. Other changes included a decision to retain the North Point Water Pollution Control Plant to provide primary treatment for some wet-weather flows, and further changes to the size and operations of the proposed Oceanside Water Pollution Control Plant. The number of overflow points was reduced from 43 to 36 by consolidation as part of designing transport/storage facilities. Each component of the Wastewater Master Plan has been evaluated in a separate environmental review document that describes the potential impacts of the component and describes the evolution of the Master Plan as regulatory requirements changed and as new engineering solutions were developed. Fifteen EIRs and Supplemental EIRs and eight negative declarations have been prepared on various aspects of the Master Plan. The U.S. Environmental Protection Agency (U.S. EPA) and the RWQCB considered the information in these environmental documents in issuing the various permits and orders for the City's Clean Water Program.

Permits issued by the RWQCB (discussed on pp. V.K.17-V.K.19 and also discussed below in this response) established requirements to construct and operate a system intended to allow for an average of no more than 1, 4, 8 or 10 treated CSOs per year, depending on the location of the outfall. Unlike many small, growing communities in the region and in California with large amounts of undeveloped land, San Francisco's treatment plants are not a limiting factor in continued development or redevelopment in the City, because capacities were developed assuming some growth/4/ and because San Francisco has limited areas of undeveloped land. The comments have not provided new information or evidence that suggest that the City should entirely re-think its overall approach to sewage conveyance, treatment, and disposal.

While changes in water quality regulations and federal funding greatly challenged the design and construction of the system, the system was completed on March 4, 1997, bringing the City into compliance with all RWQCB Cease and Desist Orders for the first time in 25 years. (See pp. V.K.1-V.K.2 and pp. J.1-J.4 for discussions of the existing combined sewer system.) As discussed further in the response regarding "Crosstown Tunnel" on pp. XII.277-XII.278, although it has not been formally deleted from the Plan, a crosstown tunnel to carry treated wastewater from the east side of the City to the west side for Ocean disposal is no longer being considered because all water quality requirements are currently being met. Thus, the existing City system is not causing impacts to water quality or to any beneficial uses of the Bay or Ocean. Existing problems not related to water quality are discussed in the responses regarding "Sewer Flooding" on pp. XII.392-XII.394, and "Odors" on pp. XII.394-XII.396.

Existing Bayside discharges of effluent and treated CSOs are regulated by two NPDES permits (see pp. V.K.17-V.K.19) issued by the RWQCB that contain effluent limitations to specifically safeguard water quality, aquatic life, and all other beneficial uses. The effluent limitations are based on the plans, policies, and water quality objectives and criteria contained in the Basin Plan, Quality Criteria for Water (EPA 440/5-86-001, 1986 [Gold Book]), applicable federal regulations (40 CFR Parts 122 and 131), the National Toxics Rule (57 FR 60848, December 22, 1992), the U.S. EPA Federal Combined Sewer Overflow Control Policy (59 IR 18688), and the application of Best Professional Judgment (40 CFR 125.3 (d)). The RWQCB reviewed numerous water quality and beneficial use studies performed by the City and accepted them as complete. In addition, extensive public participation took place when the RWQCB was considering the City's permits in 1995 and 1996. During that process, assertions were made before the RWQCB that the existing combined sewer system is overloaded, overburdened, and improperly discharging. The permit record contains data such as monitoring results that the RWQCB used in making its determination. The RWQCB considered and rejected assertions of inadequacy and issued permits to the City, determining that the system would continue to protect water quality and beneficial uses. Bayside discharges currently meet all requirements of the NPDES permits, and there are no outstanding RWQCB Cease and Desist Orders.

San Francisco is one of the first communities in the country to fully comply with the requirements of the Federal Combined Sewer Overflow Control Policy, adopted in 1994. This compliance has been achieved because of the implementation of the City's Wastewater Master Plan over the past 25 years. See the response regarding "Wet-Weather NPDES Permit," pp. XII.371-XII.376, for further discussion. This federal policy establishes a consistent approach to controlling the nation's CSO discharges and consists of a two-phase implementation process. The RWQCB has made findings in the NPDES permit that the Bayside facilities fully comply with both phases:/5/

Based on the Board's preliminary evaluation, the CSO control requirements in this permit and the NPDES Permit for the Wet-weather Diversion Structures (CA0038610) are in compliance with this [Combined Sewer Overflow Control] policy. . .

The discharger has demonstrated implementation of the nine minimum control technologies as specified in the Policy. . .

The discharger has substantially completed its CSO control program and has otherwise demonstrated compliance with section I.C.1 of the CSO Control Policy which allows grandparenting for the purposes of not preparing a (new) CSO long-term plan. . .

The discharger has demonstrated compliance with the "presumption" approach for compliance during wet weather with water quality standards. . .



The discharger's implementation of its wastewater master plan appropriately considered sensitive areas as required in the CSO Control Policy. . .

During wet weather, San Francisco operates its treatment facilities at the maximum capacity compatible with safe operation and thus is in compliance with the Policy provisions which allow for the discharge during wet weather of combined sewer flows which have received primary-only treatment. . .

As discussed on p. V.K.18, the City's wastewater system is designed to achieve treatment of all wastewater and stormwater flows. The North Point Water Pollution Control Plant provides full primary treatment and disinfection to wastewater flows from the northeast part of the City. CSOs undergo flow-through treatment, which is equivalent to primary treatment. The RWQCB found that the City's system meets the "presumption" approach to wet-weather compliance with water quality standards. A program that meets any one of the following three criteria established by the U.S. EPA in its Combined Sewer Overflow Control Policy is presumed to provide an adequate level of control to meet the requirements of the Federal Clean Water Act if such a presumption is determined by the permitting authority to be reasonable: 1) discharge of no more than an average of four untreated overflows per year from a combined sewer system; 2) treatment of 85% of the system-wide combined flows to a primary-equivalent level; or 3) reduction in pollutants equivalent to implementation of criterion 2. San Francisco's CSOs receive flow-through treatment; therefore San Francisco has no untreated overflows, meeting and exceeding criterion 1. San Francisco also meets and exceeds criterion 2 by providing flow-through treatment to its CSOs, and by providing secondary treatment to a substantial proportion of the combined flows, at the Southeast and Oceanside Treatment Plants.

CSOs are composed primarily of stormwater (about 94%), with the rest being sanitary wastewater. Thus, CSOs are not raw sewage, as is contended by many comments. The frequency of CSOs and their quality are monitored by the City and reported to the RWQCB on a monthly basis. Many of the comments suggest that overflows indicate an overload to the Bayside combined sewer system. On the contrary, the RWQCB and the U.S. EPA regulations anticipated CSOs as inherent features of a combined system, and permit requirements relating to overflows frequencies and system operations were set specifically to ensure that the overflows do not violate water quality standards. CSOs do not reflect overloading or capacity problems in the City's wastewater management system.

As concluded in the SEIR, the incremental increases in effluent and CSO flows from the Mission Bay project would be well within NPDES permit limitations and would not cause significant impacts. Increases in effluent discharges would not change concentrations, and increased volumes are within the planned capacity of the Southeast Plant. Based on the above, the existing Bayside combined sewer

system fully complies with all applicable rules and regulations, and adequately protects water quality and beneficial uses.

### **Alternative Wastewater Management Strategies**

#### ***Comments***

The DEIR fails to take an adequate look at sewer and stormwater treatment alternatives for the Mission Bay Project to protect Mission Creek and Bay water quality and to provide sufficient mitigation measures to improve Mission Creek toxics problems. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

The resolution is a wake-up call, alerting city officials and residents of a brief “window of opportunity” to chart a new course for sewage treatment for the next century, by taking action within the next three months, before permitting on new development projects is completed and the old, dysfunctional sewer system is locked in place. The new course would take the best elements of the old system, and supplement them with techniques and methods more closely fashioned on the way nature itself processes wastewater.

The latest of four official recommendations made in as many years, it urges the PUC (with oversight responsibility for operating the city’s three wastewater treatment plants) to work with “developers and appropriate city agencies,” assisted by an independent consultant, to prepare a timely, “comprehensive evaluation of feasible and sustainable alternatives for wastewater treatment and reuse.”

It’s a call for the city to draw up a comprehensive plan for treating additional sewage that new development will generate, prior to signing off on the individual projects—a process already begun, with key approvals sought by the summer. . .

These activists. . .are guided by a practical 21st century vision: to make strategic, low-cost system changes that would reduce or eliminate untreated overflows, by permitting wastewater to be collected and treated closer to where it’s generated; and to stop expansion of current centralized, capital- and energy-intensive treatment methods, with their disproportionate impact on minority communities. (*Diana Scott*)

I would hope the EIR is as complete as it can be and in the forefront of its discussion of alternative technologies that could be utilized to the maximum useful benefit, so based on the forefront of coming up with alternatives to water pollution problems that affect various sectors of this building. (*Commissioner Richard H. Hills, Planning Commission*)

#### ***Response***

Regarding the comment that the existing wastewater system is “old” and “dysfunctional,” the existing wastewater system is a new system that was constructed over a period of more than 20 years, and was completed in March 1997. The system was designed with capacity to treat existing Bayside dry- and wet-weather flows, as well as flows generated by future development in the Bayside. The existing system was constructed under order of, and with design specifications approved by, the RWQCB. It



fully complies with water quality regulations, and the RWQCB has found that the system, as constructed, adequately protects beneficial uses. No evidence has been presented in the comments to refute these conclusions. See the response regarding “Background Regarding Existing Combined Sewer System” for further discussion. Current issues that are not related to water quality are discussed in the responses regarding “Sewer Flooding” on pp. XII.392-XII.394 and “Odors” on pp. XII.394-XII.396.

Regarding the alleged failure of the SEIR to adequately examine sewer and stormwater treatment alternatives, no project-specific impacts were found. The SEIR does conservatively find a project contribution to a potentially significant cumulative near-shore impact and suggests mitigation measures in the form of specific performance criteria (see also the response in Mitigation Measures under “Delay in Specification of Mitigation Measures,” pp. XII.458-XII.460). The SEIR (see pp. V.K.27-V.K.30 and J.5-J.6) and the comments and responses in this “Alternative Wastewater Management Strategies” section discuss various wastewater management options. There is no requirement or need for the SEIR to present a more detailed analysis of the full range of options for the project or for the City’s system. The San Francisco Public Utilities Commission (SFPUC) contracted with an independent consultant, Brown and Caldwell, to examine project options that could satisfy suggested Mitigation Measures K.3 and K.4. Results of that study are outlined below in the response regarding “Brown and Caldwell (Crites) Report” on pp. XII.278-XII.289.

As discussed in the response regarding “Adequacy of Information about Project Wastewater Options” on pp. XII.280-XII.289, the Brown and Caldwell (Crites) independent consultant report does not recommend a specific technology or management plan but narrows the list of appropriate technologies for wastewater recycling and reuse and for stormwater management. The report was prepared independently of the SEIR, and is part of the SFPUC’s effort to respond to the Board of Supervisor’s resolution that alternative technologies be studied in greater depth. Please see the response under “Adequacy of Information about Project Wastewater Options” for additional discussion of the scope of the Crites report and its applicability to the Mission Bay project.

The Brown and Caldwell report concludes that the membrane bioreactor, the “Living Machine,” and constructed wetlands are potentially appropriate technologies warranting further study for the Mission Bay project.<sup>6/</sup> The membrane bioreactor is a type of reclamation plant that uses membranes to extract treated water from the activated sludge system in place of a clarifier. A living machine is a series of aerated tanks with plant roots extending into the liquid to provide sites for bacteria that remove pollutants and pathogens. Constructed wetland systems include both natural wetlands and wetlands constructed in upland areas, where plants and microbes take up and transform pollutants. However,

the Brown and Caldwell report does not suggest these technologies as alternatives to treatment of municipal wastewater at the Southeast Plant. Of the three technologies suggested in the report, two, the living machine and constructed wetlands, are capable of treating raw municipal wastewater and producing effluent equivalent to that produced by a conventional secondary treatment plant. According to the report, a living machine at Mission Bay would occupy 3.5 acres of land and would be considerably larger than any system installed by Living Technologies to date./7/ Constructed wetlands have never been used as a complete wastewater treatment system in an urban environment. The advantages and disadvantages of using constructed wetlands with this project are discussed under "Constructed Wetlands" on pp. XII.250-XII.252.

Catellus has considered the use of alternative technologies for municipal and stormwater management at Mission Bay. See also the response regarding "Adequacy of Catellus (Lee & Ro) Report" on pp. XII.289-XII.291. While Catellus found the use of many alternative technologies for municipal wastewater treatment to be inappropriate for densely-populated urban areas, the proposed project does include an unconventional stormwater management feature (in which the initial flows of stormwater in Mission Bay South would be diverted to the City's combined sewer system for treatment). Mitigation Measure K.4 on p. VI.47 could add other alternative technologies to treat Project Area stormwater. (See discussion of Mitigation Scenarios A and B, below.)

There are sound reasons to be conservative in choosing wastewater management systems. Users and environmental regulators expect wastewater systems to operate flawlessly and are often unforgiving when difficulties occur. Given a choice between a system that has been used successfully for decades and one that may be promising, but is relatively untried, considerations of public health and safety will often dictate that most wastewater treatment agencies opt for the former. This is especially true when the benefits of using different technologies are unclear and existing systems are functioning within permit requirements.

#### Decentralized Management of Sanitary Wastewater

##### *Comments*

A prudent approach would be to spend additional funds on alternatives to separate sewers and decentralized treatment in the Mission Bay development rather than continue to burden the existing system. . . It is time to re-evaluate the need for large collection sewer systems. . . In order to better handle the Mission Bay project and other Bayside developments, a comprehensive City-wide wastewater plan is critical to assess the impacts to the natural environment and communities. In addition, the TRC has called on the PUC to evaluate the need for a long-term program to separate



stormwater from sewage, so that the alternative decentralized options can work and reduce volume. *(Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment)*

In addition, because the Mission Bay area is not tied into the San Francisco combined sewer system at the present time, there should be consideration of building a separate sewer system for the two combined developments. Economies of scale in size of plant may not exist for our present system. The cost of the collector mains would be much smaller if they feed into a local plant rather than [tying] into the present collector system. [Tying] into the present system would tend to overload it and create more uncontrolled spills without more storage. A separate plant may be cheaper than the cost of larger collector mains and new storage to handle the added runoff from the two developments. *(David R. Dawdy)*

Why wasn't there "an evaluation for their capability to ability to reduce peak flows and loads on the Southeast Water Pollution Plant (Southeast Plant) and the potential to reduce or eliminate CSO's." If we're getting CSO's because the Southeast Plant is overloaded, then why weren't options even allowed to be looked at, presented, much less recommended. And why not allow a discussion of the use of satellite treatment to reduce solids at the Southeast Treatment Plant? Why only allow reuse options to be recommended "solely for their ability to produce recycled water"? What's so holy about reuse that it gets elective consideration, but clear cut and repeated demands to look at strategies that can reduce the burden on the Southeast Plant are not even allowed discussion?

We must state for the record that we do not believe that this constricted view is coming from the consultant, but rather from the City staff bent on keeping any discussion of alternatives to the Cities proposed plan and religious dedication to the centralized system from reaching the public, the Board, the legal record of this inadequate draft SEIR. *(Jeff Marmer, Coalition for Better Wastewater Solutions)*

We don't think this dumping has to happen on Bayview. We know that the alternatives can basically take Mission Bay off line. No sewage has to go to that central plant to decentralize it.

The storm water, they are going to build separate pipes. The beginning of smart thinking here. And then they're going to turn around and put 80% of it back into the combined sewer system and fill the thing up.

We're saying separate these pipes and don't send any more sewage to Bayview, it can be done. *(Jeff Marmer, Coalition for Better Wastewater Solutions)*

Surfrider Foundation is also worried about the huge amount of combined sewer overflows, the increase in overflows and storm water runoff discharges to the Bay.

The report states that only marginal increases of CSOs and direct storm water to neutral overflows will occur. But we haven't been considering seriously alternatives to decentralized treatments which would separate storm water and sewage in order to reduce the CSOs and pollution in the Bay Area and really eliminate all storm water discharges. *(Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter)*

Surfrider has been asking the city to further consider and adopt alternative decentralized treatments for stormwater so that the waste treatment plants will be able to reduce the number of CSO's that occur each year, not to mention that they can also improve the quality of the stormwater runoff. . . This could be a model urban restoration project that shows the commitment. Some or all of the flow could be diverted to a treatment marsh system that, in addition, could accept secondary treated effluent to improve water quality discharges during the dry weather. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

Three additional mitigation measures should also be added to the EIR. First, the entire Mission Bay project should include its own "package" wastewater treatment plant or some other form of secondary wastewater treatment. This would eliminate the need for wastewater flows from Mission Bay to enter the City's sanitary sewer system, which is already overloaded during heavy or long rains, thus avoiding the project's potential significant impacts on existing and future cumulative treatment problems. (*Kate White, Program Director, Urban Ecology, Inc.*)

A great opportunity is being missed in the wholesale redevelopment of the entire area as planned in the various developments, including the Giants' Pac Bell Park, the new Waterfront District, Hunters Point, the 49ers' stadium complex, the interim uses of all scales, and Mission Bay. Instead of such hidebound adherence to the DPW/PUC long term sewer plan, with its feet in the early 70's and its covert commitment to the Crosstown Tunnel, a coordinated integration of the built and natural environment should be embraced. (*Bill Wilson, Environmental Planning & Design*)

### ***Response***

Several comments assert that the Southeast Water Pollution Control Plant is already overloaded and call for a new comprehensive citywide wastewater plan, including a "decentralized" system or on-site system for Mission Bay. This would require that municipal wastewater from Mission Bay be collected, treated, and disposed by a new, separate municipal wastewater system, rather than routing all municipal wastewater to the City's combined sewer system and ultimately the Southeast Plant. A major reason for interest in a decentralized system is that it would reduce the amount of sewage routed to the Southeast Plant and the volume of combined sewer overflows (CSOs).

The San Francisco Wastewater Master Plan calls for all dry-weather municipal wastewater from the City to be treated at two wastewater treatment plants, the Southeast Plant and the Oceanside Water Pollution Control Plant. The plan does not call for separate plants at new developments.

Environmental analysis performed on the Wastewater Master Plan, however, considered a number of alternatives, including the option of many individual, smaller, "package" treatment plants./8/ That option was rejected by the City, the Regional Water Quality Control Board (RWQCB), and the U.S. Environmental Protection Agency (U.S. EPA) as inferior to centralized storage and treatment on functional (regulatory compliance, implementation, reliability, flexibility, reclamation potential), economic (nearly five times higher capital costs), and environmental grounds. The centralized plant



concept has been reaffirmed many times since the original analysis, and has led to completion of the system in March 1997.

In implementing its plan, the City has improved and expanded the Southeast Plant so that it has the capacity to provide secondary treatment to all existing and expected dry-weather flows from the eastern part of San Francisco. The plant has 150 mgd of secondary-treatment capacity; 67 mgd, less than half the capacity, is used during dry weather. Thus, the plant is not overloaded and has sufficient capacity to accommodate dry-weather municipal sewage flows from Mission Bay and all other reasonably foreseeable projects. Therefore, the existing system is not overburdened, and would not be overburdened by the project or cumulative new development. Therefore, preparation of a new citywide wastewater plan is unnecessary, and water reuse is not necessary to reduce any significant environmental impacts. However, the project proposes dual piping to allow use of reclaimed water in accordance with the City's Recycled Water Master Plan. See pp. V.M.40-V.M.42 in V.M., Community Services and Utilities for a discussion of the project's proposed reclaimed water system. See also the responses in Community Services and Utilities regarding "Wastewater," pp. XII.445-XII.447, and "Reclaimed Water, UCSF," pp. XII.447-XII.450.

The occurrences of existing and projected CSOs due to the project would not violate the Bayside wet-weather National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit specifies that the system be designed to limit the long-term average number of overflows and that these limits adequately protect water quality and beneficial uses. See the responses regarding "Background Regarding Existing Combined Sewer System" on pp. XII.232-XII.238 and "Wet-Weather NPDES Permit" on pp. XII.371-XII.376 for additional discussion. Mitigation Measure K.3 would eliminate any project contribution to increased overflows.

In addition to being unnecessary to addressing identified significant impacts, construction of a municipal wastewater treatment system serving only Mission Bay would have several disadvantages. Construction of new sewage treatment capacity would be economically inefficient because it would duplicate capacity that already exists at the Southeast Plant, and it would require more wastewater treatment operators to staff the new plant. Given that the Southeast Plant already exists, a new treatment plant would unnecessarily require additional land and funds. Wastewater treated at a new Mission Bay plant and the sludge generated would have to be recycled or disposed of. Even if some of the treated effluent could be recycled for reuse, it is unlikely that there would be a continuous demand for all the treated wastewater produced. Construction of a new disposal system would be needed to convey excess treated wastewater to deep Bay waters where it could receive the level of dilution required under the Basin Plan. Construction of a new Bay outfall would be expensive and would have short-term adverse effects on aquatic life. Furthermore, the City and Catellus have no assurance that

permitting agencies would agree to the siting of a new wastewater outfall in the Bay when adequate capacity already exists in the Southeast Plant's outfall. (Possible discharge of effluent to a wetlands, rather than to the Bay, is discussed below in the response regarding "Constructed Wetlands" on pp. XII.250-XII.252.)

A number of comments suggest that centralized wastewater treatment is an obsolete technology. Some are critical of the City's Wastewater Master Plan and offer suggestions for improvements. The Wastewater Master Plan was reviewed under CEQA, including public participation, and was approved by the RWQCB and the U.S. EPA. It is not appropriate for this SEIR to evaluate the advantages and disadvantages of the Wastewater Master Plan; rather, the purpose of this SEIR is to evaluate the environmental impacts of the Mission Bay project.

### Floating Containment

#### ***Comment***

. . . [I]nclude an evaluation of a technique in use on the East Coast and in Europe, the floating containment or Flow Balancing Method (FBM), which has the capability of completely containing sewage overflows and creating instead a waterfront amenity, but which has also been dropped from the ever-narrowing list of alternatives for reasons unknown. This should provide the SEIR reviewer and the public with at least a glimpse of the possibilities that exist. (*Bill Wilson, Environmental Planning & Design*)

#### ***Response***

While the floating containment method for eliminating overflows might be a candidate if the City decided to try to eliminate combined sewer overflows (CSOs) to the Bayside, there are much simpler and well-proven methods for eliminating the small increment in CSOs attributable to Mission Bay, such as the temporary storage or other system design measures contemplated by Mitigation Measure K.3.

Catellus is considering another mitigation option that would not only avoid an increase in CSOs but would reduce them compared to existing conditions. This would be accomplished by routing most of the stormwater runoff from the Mission Bay directly to the Bay. (See the discussion of separated storm sewers and Mitigation Scenario B in "Illustrative Mitigation Scenarios," below.)



### Alternative Stormwater Management Technologies

#### *Comments*

These comments are directed at the DEIR regarding how the existing project alternatives and the impact of combined sewage overflows (CSOs). . . fail to fully consider alternative wastewater management options . . . . The goal should be to effectively reduce pollutant load into the Bay, and source reduction before entering the combined system. . . . With a combined sewer system, San Francisco treats stormwater because it is mixed with sewage. In order to better handle metals entering the system, the DEIR needs to include source reduction. Graywater and downspout infiltration were discussed and considered to reduce wastewater, but both were rejected by the developer. The Public Utilities Commission Technical Review Committee (TRC) has expressed serious concerns about need for source reduction, for example vacuum street cleaners would eliminate a significant level of metals from stormwater “first flush.” (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

The Bayside Cumulative Impacts Analysis Draft Report does not evaluate. . . beneficial reuses of this water in other parts of the state. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer’s letter]*)

Source control is the best way to control runoff quantity and quality, and stormwater rooftop and subsurface catchment and other upstream controls should be studied in Mission Bay, as one of the major disadvantages, that of retrofitting existing buildings for the roof load associated with storage of rainwater, would not be a factor, and new buildings could be designed specifically to incorporate these controls. . .

High performance vacuum street sweeping, particularly near the end of the dry season, is technically feasible and realistic, and that erosion control measures for new construction should be reviewed to ensure that fine clays and silts are captured. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

In discussing rainfall runoff capture, the Vortech vortices stormwater vault is described as “designed to handle the initial flow from storm frequencies less than one year.” The actual design cycle is the 2-month period storm, but the beauty of the Vortech chamber is that it treats the entire storm event, not just ‘first flush’, and performance actually increases as higher flow rates maintain a consistent cyclonic-type velocity that separates pollutants. Reliance on ‘first flush’ strategies is a faulty assumption, since major pollutant loading may take several hours into a storm event to mobilize. (*Bill Wilson, Environmental Planning & Design*)

As for CSO mitigations, the SEIR should consider the same measures to reduce, capture and slow down surface water runoff which ends up flowing into the CSO system in addition to the contemplated improvements to the sewer system. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

[A] panel of appropriate technology engineers convened last spring to review a laundry list of environmentally sound treatment options. They concluded that untreated sewer overflows, combining

rain and wastewater, could be eliminated entirely by coordinated planning and implementation of a number of the methods reviewed.

Not all techniques are similarly suited to all terrains; a comprehensive study would help match a range of already identified appropriate techniques and methods to the diverse site and rainfall characteristics of different locations throughout the city, say “appropriate technology” proponents.

Ways of decelerating storm water flow, and filtering out debris near the site of where it’s created—and even recycling some cleaned water for non-drinking uses—would be matched to specific site conditions and needs. Tools with mechanical-sounding names like “flow-slipping,” “hydro-braking,” “de-synchronized pumping,” (more like surfer slang than household words) can be applied.

But for these methods to succeed, they must be tied—all of them together—into a diversified system much like nature’s. Hence the importance of a comprehensive plan.

“You can’t do it piecemeal [but must] let the whole fabric function. Piecemeal it will fail,” says [Bill] Wilson, who helped compile the document that the technical experts reviewed. (*Diana Scott*)

### ***Response***

These comments call for consideration of alternative methods for treating or otherwise managing stormwater, including infiltration of roof drainage into the ground, storage of rainwater on roofs, vacuum street sweeping, vortex separators, and constructed wetlands. Increased paved surfaces associated with urban development increase the volume and rate of stormwater runoff. If the increased runoff is routed to a combined sewer system it may contribute to combined sewer overflows (CSO), as would be the case at Mission Bay. The effect of the project on CSOs is acknowledged in the SEIR.

Mitigation Measures K.3 and K.4 would require the project sponsors and the City to consider sewer improvements and alternative technologies to avoid increases in CSO volumes and to reduce settleable solids and floatable materials in stormwater discharges in China Basin Channel. If these mitigation measures are adopted, a wide variety of methods could be used, including those suggested by the comments, those discussed in this SEIR, those considered by the project sponsors, and any others that would achieve the performance criteria set forth in the mitigation measures. Two specific options for mitigation are discussed under “Illustrative Mitigation Scenarios” on pp. XII.253-XII.277. Other techniques are discussed below for informational purposes.

The effectiveness of various processes or devices for treatment of stormwater depends on the characteristics of stormwater. Some processes remove certain pollutants more effectively than others. Compared to municipal wastewater, urban stormwater contains less of many types of pollutants. Table XII.5 shows the concentrations of various contaminants in stormwater and treated and untreated municipal wastewater. The nature and significance of the contaminants are discussed on pp. V.K.4-V.K.7. The concentration of oxygen-demanding substances in urban runoff (measured by the



**TABLE XII.5**  
**CHARACTERISTICS OF URBAN RUNOFF AND MUNICIPAL WASTEWATER**

| Constituent                      | Urban Runoff | Municipal Wastewater |                           |
|----------------------------------|--------------|----------------------|---------------------------|
|                                  |              | Untreated            | After Secondary Treatment |
| Total suspended solids (mg/l)    | 100/a/       | 220/c/               | 15/c/                     |
| Biochemical oxygen demand (mg/l) | 9/a/         | 220/c/               | 25/c/                     |
| Total phosphorus (mg/l)          | 0.33/a/      | 8/c/                 | 5/c/                      |
| Total nitrogen (mg/l)            | 1.5/a/       | 40/c/                | 30/c/                     |
| Total copper ( $\mu$ g/l)        | 33/b/        | —                    | 8.3/d/                    |
| Total lead ( $\mu$ g/l)          | 79/b/        | —                    | 3.6/d/                    |
| Total zinc ( $\mu$ g/l)          | 210/b/       | —                    | 53/d/                     |

*Notes:*

- Typical urban runoff from residential and commercial areas from National Urban Runoff Program (U.S. EPA, 1983).
- Estimates for Mission Bay based on Bay Area data (BASMAA, 1996).
- Wastewater Engineering: Treatment Disposal & Reuse, Metcalf and Eddy, 1979.
- City and County of San Francisco Effluent Monitoring.

*Source:* Woodward Clyde International.

biochemical oxygen demand test) is about one-third of that of municipal wastewater that has received secondary treatment. The nutrient content of urban runoff, measured as total nitrogen and total phosphorus, is less than one-tenth of that of municipal secondary effluent. The total suspended solids content of urban runoff is several times greater than that of municipal secondary effluent but the nature of the solids are different. Suspended solids in municipal effluent are almost entirely organic, while suspended solids in runoff are primarily mineral particles. Organic particles can be broken down by microbes and thus contribute to oxygen demand when discharged to receiving waters. Mineral particles do not affect oxygen concentrations in the receiving waters. The toxicity of secondary effluent to aquatic life is typically greater than that of stormwater because the former contains ammonia at concentrations 10 to 100 times greater than the latter.

Although they are only found in trace concentrations, some toxic metals and pesticides appear to pose the potential for environmental harm. Some of these toxic substances are associated with particulates,

and so treatment processes or devices that remove suspended solids also remove some of the toxic materials.

Various devices have been used to treat stormwater. Vortex separators and similar devices, originally developed to treat CSOs, provide a means of removing some suspended solids from stormwater. Catellus is considering their use at Mission Bay as mitigation options, as discussed under "Illustrative Mitigation Scenarios." Various other stormwater treatment devices or systems, including leaf compost, cartridge and sand filters could be used, but they were judged to be less suitable for Mission Bay conditions because they would be expected to be less effective than vortex separators or too difficult and expensive to maintain. As a point of fact, however, vortex separators can be designed to accommodate storms of greater magnitude than "2-month" storms. Also, for any particular vortex separator, the treatment effectiveness does not increase with increased flow. Performance decreases as storms tend to exceed the design specifications of the equipment./9/

Conventional street sweeping has been used to reduce stormwater pollution. A number of studies have been made of the effectiveness of street sweeping in controlling pollution from urban runoff. Studies conducted in the 1970s as part of the U.S. Environmental Protection Agency's National Urban Runoff Program (NURP) were unable to demonstrate any significant change in urban runoff quality as a result of street sweeping. In part, this results from analytical difficulties in sampling stormwater runoff. Later studies have confirmed the NURP conclusion./10/ Street sweeping certainly removes materials from street surfaces that would otherwise be washed into storm drains. However, street sweepers cannot cover many of the surfaces where pollutants accumulate (roofs, sidewalks, etc.), and they typically fail to pick up many of the smaller particles of street dirt that harbor a disproportionate fraction of toxic substances. High-efficiency street sweepers, specifically designed to remove a higher proportion of small particles from street surfaces, may have more effect on urban runoff quality, but this has not yet been shown in field tests./11/

Drainage from the roofs of buildings in San Francisco are routed to the City's combined sewer system, as required by current City subdivision regulations. The volume of stormwater flow entering the combined sewer system could be reduced by disconnecting downspouts from buildings and routing roof drainage into the soil. Infiltration of roof drainage is most practical in areas where soils are permeable and the density of development is low enough to avoid the risks of flooding. Mission Bay soils are generally not conducive to infiltration of water because of their high clay content, and there is a high groundwater table throughout much of the Project Area. In addition, it would be difficult to allocate sufficient land area for adequate infiltration due to the extent of paved (impermeable) development proposed at Mission Bay. Temporary storage of stormwater on building roofs is possible, but it could increase the risk of roof leaks. Temporary stormwater storage is provided in other parts of the City



underground. This underground storage option is explored further under “Illustrative Mitigation Scenarios.”

Other management options for stormwater could include flow-slipping, hydro-braking, and de-synchronized pumping. The goal of these techniques is to slow the stormwater sufficiently to allow some settling to occur. They could be implemented at Mission Bay if determined to comply with the performance criteria of Mitigation Measure K.4 on p. VI.47, if adopted. Multiple treatment technologies could be implemented, as well, if a combination of technologies proved to be an acceptable means of achieving the Mitigation Measure K.4 performance criteria. Source reduction measures could also be implemented, particularly as part of Mitigation Measure K.5 on p. VI.47. As indicated on p. V.K.21, source reduction is already a citywide goal of the San Francisco Water Pollution Prevention Program.

The “initial flows” capture proposed for the Central/Bay Basin is another example of an alternative approach to stormwater management. With the project as proposed, about 80% of the stormwater from the Central/Bay Basin would be treated by the combined sewer system. The resulting increase in CSO volume is relatively small at 0.22%. (As shown in Table V.K.1, a 100% combined sewer system in Mission Bay, such as exists in virtually all other areas of San Francisco, would increase CSOs by about 14 times as much as would the proposed initial-flow diversion system.) Mitigation Measure K.3 on p. VI.47, if adopted, would provide a performance criterion that would eliminate even the small increase associated with the proposed initial-flow diversion system. Regarding the comment about the SEIR’s reliance on the capture of “initial flows” to reduce pollutant discharges, the analysis is conservative in assuming that the 80% of the stormwater captured by the system would contain about 80% of the pollutants. Conventional wisdom suggests that initial flows contain a higher concentration of pollutants, although the SEIR does not rely on such an assumption to account for the possibility that pollutant loads may peak later in certain storms, as discussed on p. V.K.40.

Regarding the reuse of wastewater from the Project Area, refer to the discussion under “Reclaimed Water System” on pp. V.M.40-V.M.42 and the responses regarding “Wastewater” and “Reclaimed Water, UCSF.” The use of Project Area reclaimed stormwater in other parts of the state would be impractical because of the expense involved in transporting the water over long distances compared to the environmental benefit and possible environmental impacts of such transport.

As for the need to control erosion associated with new construction, Mitigation Measure K.1 on pp. VI.45-VI.46 includes several measures (K.1a through K.1i) to minimize the release of pollutants by construction activities.

## Constructed Wetlands

### *Comments*

Consideration should be given to a major Wetland in or near Mission Bay. As testified by others, there is a need for new wetlands to purify the water from toxics and sewage overflows. These treatment wetlands could also serve as habitat. (*Robert B. Isaacson, President, Mission Creek Conservancy*)

Although the proposed wetlands would not have been used for stormwater or CSO treatment, there would have been other benefits such as increased wildlife habitat and increased awareness and public education. We support the preliminary comments made by Mission Creek Conservancy to preserve and enhance habitat and to consider developing a major wetland. Surfrider would also like to see treatment options that include the use of wetland or pond type systems and would have a variety of environmental and social benefits. Envision a nature walk along the intertidal zone, across meandering channels and around marshy areas that were once used by the natural inhabitants long ago. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

Mission Creek-The Technical Report on environmental issues states that constructed wetlands can help mitigate surface runoff and other water pollution problems. Catellus' current plan destroys the existing wetlands habitat rather than enhancing it as was a stated goal throughout the CAC process. The enhanced wetlands can be part of the pollution solution! (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

The City of San Francisco should identify land for wetlands to reduce the volume from stormwater, handle toxins and pathogens from CSOs and protect the natural habitat. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

Moreover, consideration should be given to the creation of a major wetland in or near Mission Bay. Such a wetland could help to purify the water in Mission Creek from existing toxics and those added by sewage overflows and stormwater discharges. A treatment wetland could also serve as habitat. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

A combined treatment approach (which would take less land and/or less capital investment than any one single treatment approach) which incorporates screening, small treatment wetlands and use of the proposed landscaping along the Channel and on the east-west Commons would be possible and should be further investigated. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

The Bayside Cumulative Impacts Analysis Draft Report does not evaluate alternatives that... beneficially reuse this water to improve the community or the environmental habitat surrounding that community. Subsurface Transpiration disposal to intercept the flow followed by extensive wetlands should be included. . . (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter]*)



The ideas for drainage plans discussed for the proposed Giants and UCSF parking areas do have some merit. However, they should be adjusted to reflect consideration of storm water treatment and the possibility of a treatment wetland area which could potentially be located in the vicinity of the Giants' proposed parking area. . .

In particular, the SEIR should propose mitigation measures for the effects from proposed storm water discharges which include specific measures to reduce, capture and slow down surface water runoff, the application of storm water treatment technologies and a discharge point which would be to a significant treatment wetlands (covering 12 acres in size) which would further improve the quality of the discharge. Such a treatment wetland conceptually could also receive contaminated groundwater from the site. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

And lastly in terms of the storm water, albeit 20% coming from the site, is still going to be discharged without any treatment and another missed opportunity.

And instead of just discharging storm water untreated into the Bay, it should be going -- putting that storm water through a beneficial use, i.e., wetlands treatment process. (*Michael Lozeau, Executive Director, San Francisco Baykeeper*)

But that development doesn't seem to be using all of the new things that people are talking about these days, like restoring wetlands, preserving open space in a way that people can really learn about natural protection of the environment.

And so what I would like to see here is that for these large amounts of wastewater that are being generated, that we use things that are known in terms of wetlands to treat some of these large overflows in place.

I'd like to see that the habitat is not ruined, and that it is actually enhanced so we can bring some of the inner city kids that we're currently training to sites such as these and be proud of them within the City instead of taking them to another development where we didn't take the opportunity to restore where we could have. (*Doug Kern, Member, Urban Watershed Project*)

Baykeeper believes that strategically placed and strategically planted wetlands will absorb the metals, keeping them from going into the Bay and also providing habitat, solving two problems or three problems all at once.

So that's a mitigation that we'd like to develop further in the final EIR and clarified in the final EIR. (*Leslie Caplan, San Francisco Baykeeper*)

### **Response**

These comments express interest in the use of constructed wetlands for stormwater treatment.

Mitigation Measure K.4 would require that alternative technologies or other means be used to treat stormwater prior to discharge to China Basin Channel, and sets performance criteria for the level of treatment that must be provided for stormwater. In addition, Mitigation Measure K.5 would develop and implement a Stormwater Management Program for any other direct stormwater discharge from

Mission Bay using Best Management Practices that would meet the Maximum Extent Practicable performance standard. See also the responses regarding “Stormwater Treatment” on pp. XII.291-XII.294 and “Illustrative Mitigation Scenarios” on pp. XII.253-XII.277.

Various alternative technologies including vortex technology have been examined as a way to implement Mitigation Measure K.4. (See the response regarding “Illustrative Mitigation Scenarios” on pp. XII.253-XII.277 for further discussion of the effectiveness of vortex technology.) Constructed wetlands is another alternative treatment technology that could be used to achieve the performance criteria set by Mitigation Measure K.4. Unlike vortex technology, wetlands also provide benefits of wildlife habitat, recreation, and visual quality.

Both vortex separators and constructed wetlands remove suspended solids and associated toxic materials from stormwater. In a vortex separator, the suspended and toxic materials removed from stormwater collect in the device, and are periodically removed and disposed of to a suitable waste repository, typically a landfill. Constructed wetlands are effective as a method of stormwater treatment primarily because they provide an opportunity for suspended materials in urban runoff, and the toxic substances associated with them, to settle to the bottom of the wetland, thus removing them from stormwater before it is discharged to the environment. This also means that pollutants removed from stormwater tend to collect in the bottom sediments of the wetland rather than being removed periodically. This poses some risk that toxic materials that accumulate in the wetland may enter the biological food web, as bottom-dwelling organisms feed and are consumed by predators. Also, large storms may flush accumulated materials from the wetland and impose a sudden “shock” pollutant load on receiving waters. These risks can be lessened by installing a sediment basin that can be periodically cleaned out immediately upstream of the wetland.

Compared to other technologies available to meet the performance criteria of Mitigation Measure K.4, a constructed wetlands would occupy much more space. For example, a single vortex separator would occupy about 1,000 square feet. A constructed wetland treating the same amount of stormwater would occupy at least an acre. Thus, despite certain benefits associated with wetlands as noted above, the feasibility of wetlands in the Project Area is limited due to the value of land for other competing purposes.



## Illustrative Mitigation Scenarios

### Comments

With over 80% of all discharges entering the Southeast plant in Bayview there is strong sentiment from the Board of Supervisors, civic leaders, and community members that alternatives are necessary in Mission Bay to reduce the amount of stormwater entering the plant. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

We want an such an analysis to look at the possibility of taking this project off line from the central system: separate stormwater and give it higher treatment than CSO's. Decentralize all sewage treatment. Look for expanded opportunities to supply other bayside users, just as in the Crites proposal. Dispose of what's left separately without sending it to S.E. Treatment Plant. How much could you reduce the number, volume, and severity of overflows in the Bayview. Expand the proposed separation of stormwater to the North of Channel and Mariposa sections, especially for new development. In short, we want an environmentally superior proposal to be proposed, and one that takes into account the issue of environmental justice. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

The *Bayside Cumulative Impacts Analysis Draft Report* does not evaluate alternatives that divert all stormwater away from the existing combined-sewer system. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D, Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter]*)

The *Bayside Cumulative Impacts Analysis Draft Report* does not evaluate alternatives that divert all stormwater away from the existing combined-sewer system... (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter]*)

We applaud the SEIR's requirement of a double sewer system for most of the project area. We believe that further investigation is required before making the decision to forego the double system for the remainder of the project. (*Joe Beresford, Chair, Homeownership Committee, Bay Area Organizing Committee; and St. Theresa Church*)

### Response

The comments request consideration of completely separating the municipal sewage and stormwater sewers in the Project Area to reduce the number, volume, and severity of combined sewer overflows (CSO) in the Bayside. The comments also suggest expanding the proposed separation of stormwater to the North and Mariposa Basins, and treating the stormwater discharges to a higher level than the current level of flow-through treatment for CSOs.

As discussed in "Background Regarding Combined Sewer System" on pp. XII.232-XII.238, concerns that the City's wastewater treatment system is inadequate due to occurrences of CSOs or reliance upon

centralized wastewater treatment plants are ill-founded. Similarly, comments alleging that the project would “overload the City’s sewer system and pollute Bay waters” or cause “great environmental damage” are incorrect, and are discussed under “Alternative Wastewater Management Strategies” on pp. XII.238-XII.252 and “Wet-Weather NPDES Permit” on pp. XII.371-XII.376.

Regarding separating the municipal wastewater and stormwater sewers, as part of the proposed project, Catellus proposes to construct a separate storm drainage collection system in the Central/Bay Basin, south of China Basin Channel. However, the separated systems would be connected so that approximately 80% of the stormwater collected in the system would be diverted to the combined sewer system for treatment. The remaining 20% would be discharged untreated directly to the Bay. The purpose of this “initial flow” system is to capture a high proportion of the stormwater and treat it. Catellus chose this design for its stormwater collection system because it offers the advantage that most of the stormwater runoff generated within the Mission Bay Project Area would be treated at the Southeast Plant before discharge to deep waters of the Bay, while the stormwater discharged directly to the Bay would reduce the project’s potential contribution to CSOs compared with a conventional combined system. However, the design would increase the volume of CSOs by about 0.22%.

The SEIR includes two mitigation measures to address alternative technologies and the project’s contributions to CSOs: Mitigation Measures K.3 and K.4 on p. VI.47 of the SEIR. Mitigation Measure K.3 applies to the entire Project Area, and Mitigation Measure K.4 applies only to Project Area stormwater discharged to China Basin Channel. As described on pp. V.K.24-V.K.27, the project would discharge some stormwater from the Central/Bay Basin to China Basin Channel and adjacent areas as a result of separating the sewer system in this watershed (i.e., one set of pipes for sanitary sewage and one set for stormwater).

In response to public comments and interest regarding alternative technologies and separated systems, two mitigation scenarios have been analyzed to illustrate two of the many possible ways to implement Mitigation Measures K.3 and K.4; other scenarios could be developed and implemented in lieu of one of the mitigation scenarios discussed below.

Mitigation Scenario A would eliminate the project’s contribution to increased CSOs by constructing additional storage and would use vortex separators (defined below) to treat stormwater. Mitigation Scenario B would also use vortex separators and would not only eliminate the project’s contribution to CSOs, but would also decrease CSOs below baseline conditions by directly discharging all stormwater from Mission Bay South (instead of 20% of the stormwater from the Central/Bay Basin, as proposed).



Mitigation Scenario B would separate the sewers in the Central/Bay Basin and the Mariposa Basin, but not in the North Basin. The North Basin of the Project Area is part of a larger collection basin, and is situated in a downstream area within that larger basin. The existing combined sewers in the North Basin convey the combined flows from the larger basin to the Channel Outfalls Consolidation facility. In contrast, the Central/Bay Basin and Mariposa Basin are upstream (i.e., in the “headwaters”) of the City’s existing combined sewer system and can be isolated. Furthermore, the combined sewer system infrastructure serving the North Basin is, for the most part, complete; it requires only lateral sewers to accommodate the project. Therefore, construction of a completely new, separate system would not be cost-effective. The combined sewer infrastructure in the Central/Bay Basin is not well-developed, and is fairly developed in the Central/Bay Basin and the Mariposa Basin. Therefore, Mitigation Scenario B includes separated sewers in the Mariposa Basin to effectively bracket the maximum reasonable extent to which the Project Area sewers could be separated. The SEIR does not identify the need to separate the sewers of the Mariposa Basin to address any significant impacts, and constructing a new separated system in Mission Bay North is not needed to satisfy Mitigation Measure K.3 or K.4.

Both Mitigation Scenarios A and B would involve the use of vortex separator technology to treat direct stormwater discharges to China Basin Channel, and both would install this technology at all Project Area stormwater outfalls, not just at the Channel as required by Mitigation Measure K.4. With this exception, Mitigation Scenario A addresses Mitigation Measures K.3 and K.4, but goes no farther than necessary to do so. Mitigation Scenario B explores an approach that would implement Mitigation Measures K.3 and K.4 and would also respond to various comments by decreasing stormwater flows to the Southeast Water Pollution Control Plant.

Neither Mitigation Scenario A nor B would eliminate wastewater flow to the Southeast Plant because dry-weather flow cannot be eliminated without building a separate treatment plant, which is not warranted to avoid any significant effects (see “Decentralized Management of Sanitary Wastewater” on pp. XII.240-XII.244).

The following subsections describe the mitigation scenarios, describe the alternative technologies assumed, and discuss the potential environmental effects of the Mitigation Scenarios compared to the Base Case and the proposed project.

### Description of Mitigation Scenarios

#### Mitigation Scenario A

Mitigation Scenario A would construct additional storage and use vortex technology to treat stormwater discharges in Mission Bay South. To ensure that the project contributes a zero net increase to the City's average annual overflow volume, Mitigation Scenario A would construct approximately 350,000 gallons/12/ of additional on-site storage, for total storage of approximately 1.1 million gallons. The stored wastewater would be released later for treatment in the City's existing combined system as capacity becomes available./13/

To reduce settleable solids and floatable materials in stormwater discharges to China Basin Channel, Mitigation Scenario A would implement a vortex or a similar technology, going beyond the Mitigation Measure K.4 requirement (which would be limited to China Basin Channel) by equipping each of the four storm outfalls (including those outfalls along the Bay shore) with a vortex (or similar) unit. This scenario does not assume the use of any other alternative technologies, although other technologies, including vacuum street sweeping, could somewhat enhance overall pollutant removal effectiveness.

#### Mitigation Scenario B

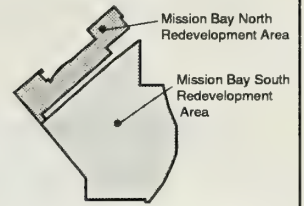
Mitigation Scenario B would construct fully separated sewers, without any diversion to the City's combined sewer system, in Mission Bay South. The separated sewers in Mission Bay South would carry stormwater to five outfalls, the four outfalls planned under the project and Mitigation Scenario A, and another stormwater outfall at Terry A. François Boulevard and Sixteenth Street to serve the Mariposa Basin, as shown in Figure XII.1.

Thus, instead of storing a portion of the stormwater runoff from the Central/Bay Basin for later release to the combined sewer system, Mission Bay South (both Central/Bay Basin and Mariposa Basin) would not contribute any stormwater runoff to the City's combined sewer system. All runoff would be discharged directly to near-shore Bay and Channel waters after vortex treatment. In this way, Scenario B would not only eliminate the Project's contributions to CSOs, but, as analyzed by the Bayside Planning Model, would further reduce CSO volumes and durations below the Base Case level.

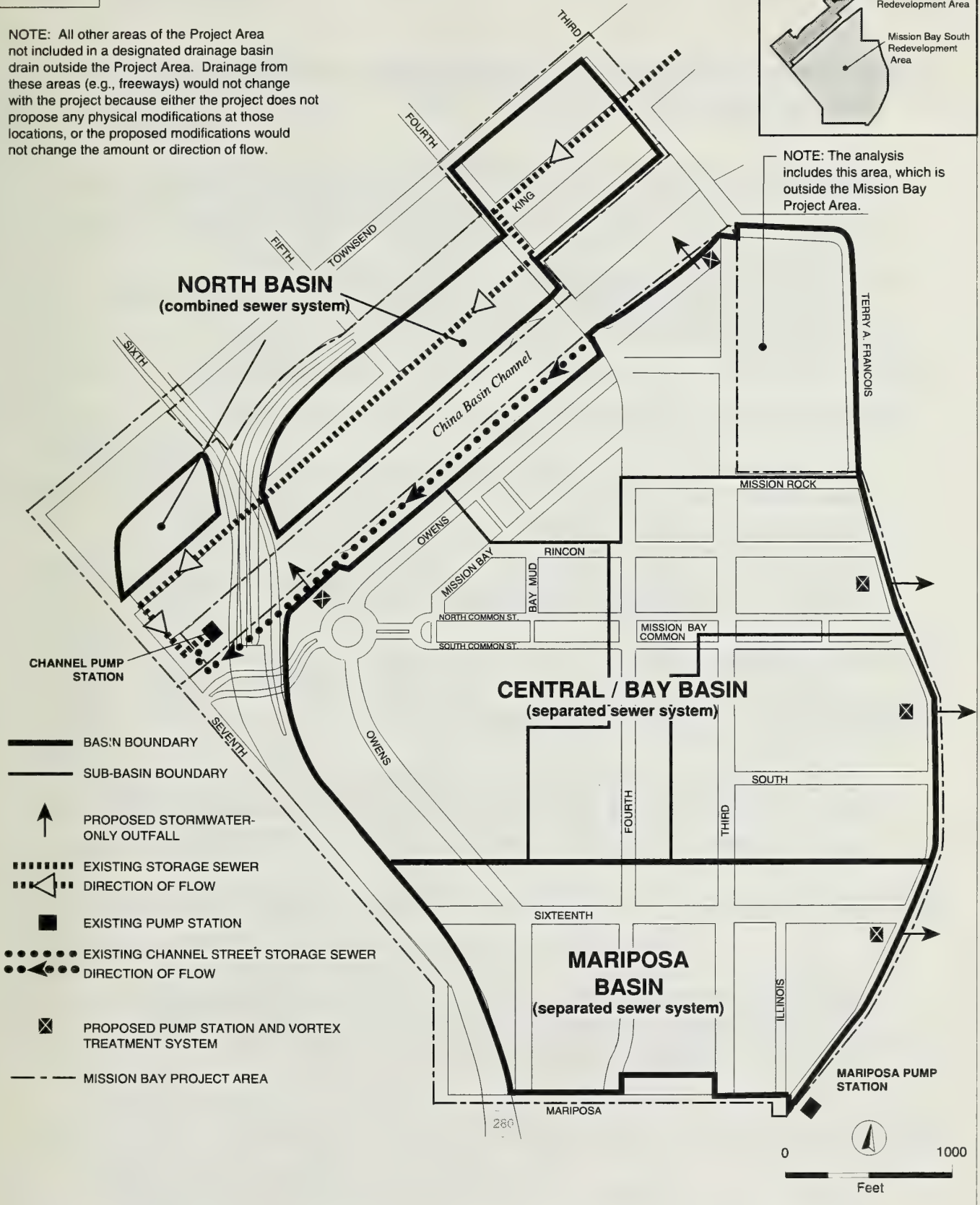
As with Mitigation Scenario A, for the purposes of this analysis, Mitigation Scenario B is assumed to implement Mitigation Measure K.4 by using vortex technology (or a similar technology) to treat stormwater discharges from Mission Bay South. This scenario does not assume the use of other alternative technologies.



NOTE: All other areas of the Project Area not included in a designated drainage basin drain outside the Project Area. Drainage from these areas (e.g., freeways) would not change with the project because either the project does not propose any physical modifications at those locations, or the proposed modifications would not change the amount or direction of flow.



NOTE: The analysis includes this area, which is outside the Mission Bay Project Area.



**MISSION BAY SUBSEQUENT EIR**  
**FIGURE XII.1 STORMWATER DRAINAGE BASINS**  
**IN THE PROJECT AREA UNDER MITIGATION SCENARIO B**

To ensure that Mitigation Measure K.3 on p. VI.47 clearly accommodates this approach to reducing CSOs, it has been revised as follows:

**Design and construct sewer improvements such that potential flows to the City's combined sewer system from the project do not contribute to an increased in the annual overflow volume as projected by the Bayside Planning Model. by providing increased storage could be provided in oversized pipes, centralized storage facilities, smaller dispersed storage facilities, or detention basins, or through other means to reduce or delay stormwater discharges to the City system. Applies to Mission Bay North and Mission Bay South.**

Similar changes have been made to the first two sentences of the last paragraph on p. II.29 of Chapter II, Summary:

**Mitigation measures to address cumulative issues include designing and building sewer improvements so that potential flows from the project do not contribute to an increased in the annual overflow volume as projected by the City's Bayside Planning Model. by providing increased storage could be provided in oversized pipes, centralized storage facilities, smaller dispersed storage facilities, or detention basins, or through other means to reduce or delay stormwater discharges to the City system.**

To ensure that Mitigation Measure K.5 on p. VI.47 would apply throughout Mission Bay South (and not just to the Central/Bay Basin) if Mitigation Scenario B were selected, the first sentence of Mitigation Measure K.5 has been revised as follows:

**Develop and implement a Stormwater Management Program ~~for the Central/Bay Basin~~ applicable to new and interim development under the Redevelopment Plan in any area contributing to direct discharges of stormwater to near-shore waters.**

A change similar to the one above has been made to the fifth sentence of the same Mitigation Measure K.5:

**Implement the Stormwater Management Program until a city-wide stormwater management program is developed that includes any area contributing to direct discharges of stormwater to near-shore waters ~~the Central/Bay Basin.~~**

Language on p. II.30 in Chapter II, Summary, first partial paragraph, third sentence, has also been similarly revised:

**Another mitigation to address stormwater quality is developing and implementing a Stormwater Management Program for any area contributing to direct discharges of**



**stormwater to near-shore waters. The program would include the Central/Bay Basin, including Best Management Practices, applicable during phased development of the Project Area.**

In addition, Mitigation Measure M.5 on p. VI.53 has been revised as follows so that the mitigation could apply to a separated sewer system, if Mitigation Scenario B were chosen:

**M.5        Drain stormwater runoff (up to a 5-year storm event) from newly constructed buildings and permanently covered surfaces in the Bay Basin into the City's combined sewer system until installation of a separated permanent sewer system with a function "initial flow" diversion system. Applies to Mission Bay South.**

Table XII.6 compares the characteristics of Mitigation Scenario A and Mitigation Scenario B to the proposed project.

#### Vortex Technology

Upon study of potential alternative technologies and after review of the Brown and Caldwell (Crites) report, Catellus proposed for further examination the vortex technology as a possible end-of-pipe stormwater treatment. At the City's request, Woodward Clyde International independently evaluated the potential effectiveness of the vortex technology, similar technologies, and vacuum street sweeping./14/ Based on the literature and professional judgment, a reasonable range of efficiency for the vortex technology is 40% (tests by the United Sewerage Agency of Portland, Oregon) to 70% (manufacturer data) for removal of Total Suspended Solids./15/ Based on the literature and professional judgment, a reasonable range of efficiency for vacuum street sweeping is 10% to 20% removal of particulates./16/

The vortex technology works in the following way. A vortex separator has a cylindrical chamber. The wastewater is funneled into the chamber so that a rotational flow is created.

This rotational flow encourages particulates to move to the outer portion of the unit (somewhat analogous to a centrifuge), where the downward component of the flow concentrates solids near the bottom. Particulates are collected on the side of the vortex, then into a storage unit that can be emptied during dry weather. The treated water exits the chamber for eventual discharge.

To be conservative, the SEIR uses the lower end of the particulate removal efficiency range, i.e., 40%, to estimate the removal of particulates by the vortex units.

TABLE XII.6  
COMPARISON OF MITIGATION SCENARIOS WITH PROPOSED PROJECT

|                       | North Basin   |   |                     |
|-----------------------|---|---|---------------------|
|                       | Sewer System  | End of Pipe Treatment for Stormwater (Vortex) | Stormwater Outfalls |
| Project               | Combined  | Not Applicable                                | 0                   |
| Mitigation Scenario A | Combined  | Not Applicable                                | 0                   |
| Mitigation Scenario B | Combined  | Not Applicable                                | 0                   |
|                       | Central/Bay Basin   |   |                     |
|                       | Sewer System  | End of Pipe Treatment for Stormwater (Vortex) | Stormwater Outfalls |
| Project               | Separated with initial flow diversion   | No  | 4                   |
| Mitigation Scenario A | Separated with initial flow diversion and extra storage to eliminate the project's contribution to CSOs | Yes   | 4                   |
| Mitigation Scenario B | Separated without initial flow diversion  | Yes   | 4                   |
|                       | Mariposa Basin  |   |                     |
|                       | Sewer System  | End of Pipe Treatment for Stormwater (Vortex) | Stormwater Outfalls |
| Project               | Combined  | Not Applicable                                | 0                   |
| Mitigation Scenario A | Combined  | Not Applicable                                | 0                   |
| Mitigation Scenario B | Separated without initial flow diversion  | Yes   | 1                   |

Source: EIP Associates; Catellus Development Corporation.



### Comparison of Environmental Effects of Proposed Project and Mitigation Scenarios

#### Changes in Wastewater Volumes

Table XII.7 summarizes the changes in the flows of Southeast Plant effluent, CSOs, and stormwater discharges, for the Mitigation Scenarios compared to the Bayside Base Case and to the project/17/. Assuming a built-out condition for the Project Area, under both scenarios the Project Area would generate the same amount of municipal wastewater (dry-weather sanitary flow) and stormwater as the proposed project, but what happens to the stormwater would differ from the project.

Under Mitigation Scenario A, additional stormwater storage within the Project Area would reduce the project's contribution to CSOs to zero. (In other words, the volume of CSO discharges along the Bayside under Mitigation Scenario A would be the same as the volume discharged under the Bayside Base Case, or 910 MG/yr.) After a storm, the stored stormwater would be sent to the Southeast Plant for treatment. Therefore, compared to the project, the effluent from the Southeast Plant would increase by about 2 million gallons per year (MG/yr) (remaining at about 31,000 MG/yr), and the CSOs would decrease by the same amount (from about 912 MG/yr for the project to about 910 MG/yr for Mitigation Scenario A).

The amount of stormwater generated by the Project Area, about 124 MG/yr, would remain the same under Mitigation Scenarios A and B as under the project. Under Mitigation Scenario A, the amount discharged to the near-shore waters, about 15.9 MG/yr, would also remain approximately the same, although this flow would be treated by the vortex units. Under Mitigation Scenario B, however, stormwater from all of Mission Bay South (Central/Bay Basin plus Mariposa Basin) would be directly discharged to near-shore waters whenever it rains, regardless of the size of the storm. (Under the project, 80% of the stormwater from the Central/Bay Basin and 100% of the stormwater from the Mariposa Basin would be diverted into the combined sewer system.) The stormwater discharge volume would be 107.2 MG/yr, almost seven times greater than under either the Bayside Base Case, the proposed project, or Mitigation Scenario A.

As a result of direct stormwater discharge, Mission Bay South would contribute no stormwater flow to the City's combined sewer system. The effect of discharging the Mission Bay South stormwater directly to near-shore waters would be to decrease the project's contribution to CSOs to a negative value (not just to zero, as would be required by Mitigation Measure K.3). The volume of CSO discharges would be 877 MG/yr, or about 33 MG/yr (3.6%) less than the Bayside Base Case, and about 35 MG/yr (3.8%) less than under the proposed project.

TABLE XII.7  
EFFLUENT, OVERFLOW, AND STORMWATER VOLUMES

|   | Change from Base Case (%) |                        |                             |                             | Change from Base + Project (%)    |                             |                             |
|---|---------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------------|-----------------------------|-----------------------------|
|   | Bayside<br>Base Case      | Base Case +<br>Project | Base Case +<br>Mitigation A | Base Case +<br>Mitigation B | Bayside<br>Base Case<br>+ Project | Base Case +<br>Mitigation A | Base Case +<br>Mitigation B |
|   |                           |                        |                             |                             |                                   |                             |                             |
| Total Deepwater Discharge<br>(Effluent)(MG/yr)  | 30,203                    | 842 (2.8%)             | 844 (2.8%)                  | 789 (2.6%)                  | 31,045                            | 2 (0.006%)                  | -53 (-0.17%)                |
| Total Near-shore Discharge<br>(CSO + Stormwater) (MG/yr)  | >926                      | +2.4 (+0.22%)          | 0 (0%)                      | +58 (+6.3%)                 | >928                              | -2 (-0.22%)                 | +56 (+6.0%)                 |
| Total Bayside CSO Discharges<br>(MG/yr)   | 910                       | +2 (+0.22%)            | 0 (0%)                      | -33 (-3.6%)                 | 912                               | -2 (-0.22%)                 | -35 (-3.8%)                 |
| Project Area Stormwater<br>Discharges (MG/yr)   | 15.6                      | +0.4 (+2.6%)           | +0.4 (+2.6%)                | +91.6 (+590%)               | 15.9                              | 0 (0%)                      | +91.3 (+570%)               |
| Other Bayside Stormwater<br>Discharge   | N/A                       | N/A                    | N/A                         | N/A                         | N/A                               | N/A                         | N/A                         |
| <i>Notes:</i>   |                           |                        |                             |                             |                                   |                             |                             |
| MG/yr = million gallons per year  |                           |                        |                             |                             |                                   |                             |                             |
| N/A = not available   |                           |                        |                             |                             |                                   |                             |                             |
| Data are not available from which to derive volumes and quality of direct stormwater discharges from outside the Project Area. The sum of Bayside CSOs plus direct discharges of stormwater along the Bayside understates the actual total near-shore discharge volume. Therefore, the percentage changes shown for the project and Mitigation Scenarios A and B overstate the volume changes from Base Case and Base-Case-plus-Project conditions. |                           |                        |                             |                             |                                   |                             |                             |
| <i>Source:</i> City and County of San Francisco, Public Utilities Commission, Clean Water Program, Draft Bayside Cumulative Impact Analysis, July 1998; EIP Associates.   |                           |                        |                             |                             |                                   |                             |                             |



Because no diversion of Mission Bay South stormwater to the City's combined sewer system would occur under Mitigation Scenario B, the volume of Southeast Plant effluent would be slightly less than under the proposed project. The effluent volume would be about 789 MG/yr (2.6%) more than the Bayside Base Case, but it would be 53 MG/yr (0.17%) less than under the proposed project.

#### Pollutant Load Changes

The SEIR discusses changes in wastewater discharge volumes and pollutant loads for the proposed project on pp. V.K.30-V.K.40. Tables V.K.2, V.K.3, and V.K.4, on pp. V.K.35, V.K.37, and V.K.39, respectively, summarize changes in pollutant loads for the project. These tables have been revised to reflect certain corrections that do not affect any of the analyses or conclusions (see "Hydrology and Water Quality" in Section D, Staff-Initiated Text Changes, on p. XII.511). The following paragraphs compare the Mitigation Scenarios to the project in terms of pollutant loads.

#### *Changes in Effluent and CSO Loads*

Because Bayside effluent and CSO discharges would receive the same level of treatment with or without the project, pollutant concentrations in these discharges are assumed to remain the same. Under this assumption, load changes would occur in rough proportion to volume changes. Therefore, under Mitigation Scenario A, the pollutant load discharged through effluent from the Southeast Plant would increase by 2.8% from Base Case conditions, and by 0.0064% from project conditions. Mitigation Scenario A would not contribute to CSO discharges; therefore, compared to the proposed project, the CSO load would represent a 0.22% decrease. Under Mitigation Scenario B, the mass of pollutants discharged in effluent from the Southeast Plant would increase by 2.6%, due to increase in dry-weather flows, over the Bayside Base Case, and the mass of pollutants discharged through treated CSOs would decrease by 3.6% compared to the Base Case. Compared to the proposed project, the load discharged in Southeast Plant effluent would decrease by 0.17%, and the load discharged in CSOs would decrease by 3.8%.

Changes in copper and zinc loads can be used to illustrate these differences, which would often be too small to substantially change pollutant loads. Whereas the average copper loads in effluent and CSOs are about 2,100 lb/yr and 300 lb/yr, respectively, under the Base Case, these loads would be about 2,200 lb/yr and 300 lb/yr with the project. The copper load in effluent would remain about 2,200 lb/yr with either Mitigation Scenario A or B, and the load in CSOs would be about 300 lb/yr with Mitigation Scenario A and about 290 lb/yr with Mitigation Scenario B. The decrease in copper discharges for Mitigation Scenario B would be offset by increased copper loads from stormwater, as discussed below. As for zinc, the effluent load is and would continue to be about 13,000 lb/yr with either the

unmitigated project, Mitigation Scenario A, or Mitigation Scenario B. The zinc load in CSOs is and would continue to be about 2,400 lb/yr with the unmitigated project or Mitigation Scenario A. Mitigation Scenario B would reduce CSO flows sufficiently to reduce the zinc load to about 2,300 lb/yr. As with copper, this decrease is offset by increased stormwater discharge, as discussed below.

For further elaboration, Tables J.1 through J.6 have been added to Appendix J, Hydrology and Water Quality, after p. J.7. The tables present detailed data on changes in wastewater volumes and loading for both mitigation scenarios. Tables J.1 through J.4 mirror Tables V.K.1 through V.K.4 of Section V.K, Hydrology and Water Quality. In addition, Tables J.5 and J.6 present the estimated mass pollutant loading of copper and zinc. These tables are reproduced in an appendix to this Summary of Comments and Responses document.

#### *Changes in Stormwater Loads*

The total stormwater pollutant load ultimately discharged to China Basin Channel and San Francisco Bay under Mitigation Scenario A would be less than the proposed project because vortex units installed at each stormwater outfall would remove approximately 40% of the particulates, including certain proportions of particulate-associated metals. The removal efficiency for a particular metal depends upon the proportion dissolved versus in particulate form, the size of the particles, and other factors.<sup>/18/</sup> Field results obtained by the Unified Sewerage Agency in Portland, Oregon, indicate removal efficiencies for six metals ranging from a low of 14% for lead to a high of 36% for zinc, while a manufacturer's laboratory data show 60% removal for lead and 39% for zinc.<sup>/19/</sup> To be conservative, this analysis uses the Unified Sewerage Agency field data. Tables XII.8 and XII.9 present results for two metals of interest, copper and zinc.<sup>/20/</sup>,<sup>/21/</sup> The vortex removal efficiencies assumed for copper and zinc are 20% and 36%, respectively. Mitigation Scenario A would thus discharge 20% less copper and 36% less zinc in its stormwater discharge than the proposed project, as explained below.

The copper load in Project Area stormwater for the Base Case is about 2.8 lb/yr. With the project, this copper load could increase to about 4.3 lb/yr. Mitigation Scenario A would reduce this copper load to 3.5 lb/yr (about a 0.63 lb/yr increase over the Base Case), and Mitigation Scenario B would increase the copper load to 24 lb/yr (an increase of about 21 lb/yr over the Base Case). Under Mitigation Scenario B, some of this copper load would instead have been discharged in CSOs, but Mitigation Scenario B would reduce CSO copper loading, as discussed above.

The zinc load in Project Area stormwater is about 24 lb/yr for the Base Case. With the project, the zinc load could increase to about 27 lb/yr. Mitigation Scenario A would reduce this zinc load to 17 lb/yr (about 6.6 lb/yr less than the Base Case). Mitigation Scenario B would increase the zinc load to



**TABLE XII.8**  
**ESTIMATED ANNUAL MASS COPPER LOADING TO NEAR-SHORE WATERS**  
**FROM OVERFLOWS AND STORMWATER DISCHARGES**

|  | Change from Base Case (%) |                     |                          |                          | Change from Base + Project (%) |                            |
|--|---------------------------|---------------------|--------------------------|--------------------------|--------------------------------|----------------------------|
|  | Bayside Base Case         | Base Case + Project | Base Case + Mitigation A | Base Case + Mitigation B | Bayside Base Case + Project    | Base Case + Mitigation B   |
| Total Near-shore Discharge (lb/yr)         | > 300                     | +2.1 (+0.72%)       | +0.63 (+0.21%)           | +10 (+3.4%)              | > 300                          | -1.5 (-0.51%) +8.1 (+2.7%) |
| Total Bayside CSO Discharges (lb/yr)       | 300                       | +0.65 (+0.22%)      | 0 (0%)                   | -11 (-3.6%)              | 300                            | -0.65 (-0.22%) -11 (-3.8%) |
| Project Area Stormwater Discharges (lb/yr) | 2.8                       | +1.5 (+53%)         | +0.63 (+22%)             | +21 (+740%)              | 3.5                            | -0.87 (-20%) +20 (+450%)   |
| Other Bayside Stormwater Discharges        | N/A                       | N/A                 | N/A                      | N/A                      | N/A                            | N/A                        |

*Notes:*

lb/yr = pounds per year  
N/A = not available

Data are not available from which to derive volumes and quality of direct stormwater discharges from outside the Project Area. The total load contributed by Bayside CSOs plus direct discharges of stormwater along the Bayside understates the actual total load discharged to near-shore waters. Therefore, the percentage changes shown for the project and Mitigation Scenarios A and B overstate the load changes from Base Case and Base-Case-plus-Project conditions.

The copper load discharged under the Base Case, Project, and Mitigation Scenario A is less than under Scenario B because, under the first three, most of the Project Area stormwater would go to the combined sewer system for treatment at the Southeast Water Pollution Control Plant, and a larger proportion of total copper would be removed by the Southeast Plant than would be removed by the vortex technology.

*Source:* EIP Associates; City and County of San Francisco, Public Utilities Commission, Clean Water Program, Draft Bayside Cumulative Impact Analysis, July 1998.

TABLE XII.9  
ESTIMATED ANNUAL MASS ZINC LOADING TO NEAR-SHORE WATERS  
FROM OVERFLOWS AND STORMWATER DISCHARGES

|  | Change from Base Case (%) |                        |                             |                             | Change from Base + Project (%)    |                             |                             |
|--|---------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------------|-----------------------------|-----------------------------|
|  | Bayside<br>Base Case      | Base Case +<br>Project | Base Case +<br>Mitigation A | Base Case +<br>Mitigation B | Bayside<br>Base Case<br>+ Project | Base Case +<br>Mitigation A | Base Case +<br>Mitigation B |
|  |                           |                        |                             |                             |                                   |                             |                             |
| Total Near-shore Discharge (lb/yr)         | > 2,400                   | +8.6 (+0.35%)          | -6.6 (-0.27%)               | +10 (+0.40%)                | > 2,500                           | -15 (-0.62%)                | +1.2 (+0.049%)              |
| Total Bayside CSO Discharges (lb/yr)       | 2,400                     | +5.3 (+0.22%)          | 0 (0%)                      | -88 (-3.6%)                 | 2,400                             | -5.3 (-0.22%)               | -93 (-3.8%)                 |
| Project Area Stormwater Discharges (lb/yr) | 24                        | +3.2 (+13%)            | -6.6 (-27%)                 | +98 (+410%)                 | 27                                | -9.8 (-36%)                 | +94 (+350%)                 |
| Other Bayside Stormwater Discharge         | N/A                       | N/A                    | N/A                         | N/A                         | N/A                               | N/A                         | N/A                         |

Notes:

lb/yr = pounds per year  
N/A = not available

Data are not available from which to derive volumes and quality of direct stormwater discharges from outside the Project Area. The total load contributed by Bayside CSOs plus direct discharges of stormwater along the Bayside understates the actual total load discharged to near-shore waters. Therefore, the percentage changes shown for the project and Mitigation Scenarios A and B overstate the load changes from Base Case and Base-Case-plus-Project conditions.

The zinc load discharged under the Base Case, Project, and Mitigation Scenario A is less than under Scenario B because under the first three, most of the Project Area stormwater would go to the combined sewer system for treatment at the Southeast Water Pollution Control Plant, and a larger proportion of total copper would be removed by the Southeast Plant than would be removed by the vortex technology.

Source: EIP Associates; City and County of San Francisco, Public Utilities Commission, Clean Water Program, Draft Bayside Cumulative Impact Analysis, July 1998.



120 lb/yr (an increase of about 98 lb/yr over the Base Case). Some of this zinc load would instead have been discharged in CSOs, but Mitigation Scenario B would reduce CSO zinc loading, as discussed above.

Compared with the Base Case, Mitigation Scenario A would discharge about 22% more copper in stormwater, and about 27% less zinc. These comparisons to the Base Case may seem counterintuitive, but the changes in stormwater concentrations are complex, being driven by changes in type of land use and intensity of land use, and the corresponding loads of different pollutants to stormwater runoff. Mitigation Scenario A would increase copper loadings more than zinc loadings, relatively speaking, compared to the Base Case, because the vortex units would be less efficient at removing copper than zinc. The net result is that copper loads in stormwater would go up, while zinc loads would go down.

The amounts of copper and zinc discharged in stormwater under Mitigation Scenario B are several times more than under the Bayside Base Case or proposed project. This is primarily because relatively little stormwater is or would be discharged under the Base Case or proposed project, and Mitigation Scenario B would not include any capture of initial flows, resulting in about seven times more stormwater discharge than under either the Base Case or proposed project (see Table XII.7). With the same removal efficiencies assumed for the vortex units as for Mitigation Scenario A, Mitigation Scenario B would discharge about 8.4 times more copper than under the Bayside Base Case, and about 5.5 times more than under the proposed project. The amount of zinc discharged would be 5.1 times more than under the Bayside Base Case, and about 4.5 times more than under the proposed project.

Under the project and Mitigation Scenario A, about 80% of the stormwater from the Central/Bay Basin and 100% of the stormwater (up to a five-year storm) from the other drainage basins in the Project Area would be captured and sent to the Southeast Plant. The metals would either be removed at the Southeast Plant or discharged as part of the effluent in the deep waters of the Bay or, to a much lesser extent, as CSOs to the near-shore waters of the Bay. Under Mitigation Scenario B, all stormwater from the Central/Bay Basin and Mariposa Basin would be discharged directly to the near-shore waters, including China Basin Channel and the Project Area Bayfront, with vortex treatment, but no treatment at the Southeast Plant.

#### *Changes in Near-Shore Loads (CSOs and Stormwater Combined)*

Although Mitigation Scenarios A and B would affect effluent, CSO, and stormwater pollutant loads, they would not substantially affect the total load delivered to the Bay. The total load is, and would continue to be, dominated by the effluent load because the effluent flow (on the order of 30,000 MG/yr) is, and would continue to be, orders of magnitude greater than the CSO flow (on the order of

900 MG/yr) and stormwater flow (on the order of 20 to 100 MG/yr for the Project Area). For this reason, Mitigation Scenarios A and B would most greatly affect the loads discharged to the near-shore waters, as discussed below.

Effects to near-shore discharges can be illustrated by adding together the CSO pollutant loads and stormwater loads. Because of the available data, the estimated loads for the CSOs are for the *entire Bayside*, whereas the estimated loads for stormwater are for *only the waters near the Project Area*, i.e., China Basin Channel and the Bay shore adjacent to the Project Area. The volume of stormwater discharged to the Bayside but not from the Project area is unknown, and by not accounting for it, this analysis illustrates conservative (erring on the high side) estimates of possible relative changes in pollutant loads.

Estimated CSO plus stormwater discharges to the near-shore waters are about 926 MG/yr for the Base Case and would be about 928 MG/yr for the Base Case plus Project, about 926 MG/yr for Mitigation Scenario A, and about 984 MG/yr for Mitigation Scenario B. Copper and zinc illustrate differences in pollutant loads among the scenarios. Estimated near-shore copper discharges are about 300 lb/yr for the Base Case and would be about 300 lb/yr for the Base Case plus Project, about 300 lb/yr for Mitigation Scenario A, and about 310 lb/yr for Mitigation Scenario B. Except in the case of Mitigation Scenario B, changes in the amount of copper discharged in stormwater would be too small to distinguish among the near-shore loads, which are dominated by CSO loads. Estimated zinc discharges are about 2,400 lb/yr for the Base Case and would be about 2,500 lb/yr for the Base Case plus Project, about 2,400 lb/yr for Mitigation Scenario A, and about 2,500 lb/yr for Mitigation Scenario B. Again, changes in the amount of zinc discharged in stormwater would be too small to distinguish among the near-shore loads.

Compared to Bayside Base Case conditions, the changes in near-shore copper load discharges (CSOs and stormwater combined) contributed by the project, Mitigation Scenario A, and Mitigation Scenario B would be 0.72%, 0.21%, and 3.4% respectively. Compared to the proposed project, the copper loads discharged by Mitigation Scenario A and Mitigation Scenario B would be -0.51% and 2.7%, respectively. Therefore, all three scenarios would result in an increase in copper, but Mitigation Scenario A would cause the smallest increase. All increases would be relatively small compared to Base Case conditions.

With regard to the zinc load in near-shore discharges, the changes that would be caused relative to Bayside Base Case conditions under the project, Mitigation Scenario A, and Mitigation Scenario B are 0.35%, -0.27%, and 0.40%, respectively. Compared to the project, Mitigation Scenario A would contribute 0.62% less zinc, and Mitigation Scenario B would contribute 0.04% more zinc. Therefore,



Mitigation Scenario A would contribute less zinc than the proposed project, and would actually decrease the amount of zinc discharged to near-shore waters below Bayside Base Case conditions. All the changes in zinc loads would be relatively small compared to existing conditions.

The discussion above addresses total pollutant loads. Because the vortex units would remove only a portion of the metal associated with particulates, the portion dissolved in water would pass through the vortex units unaffected. Therefore, the concentrations of *dissolved* metals in stormwater discharged to near shore waters would be the same as those under the proposed project, regardless of whether Mitigation Scenario A or B were implemented.

#### Effects on Receiving Waters and Beneficial Uses (Pollutant Concentrations)

As explained under “Effects on Receiving Waters” on p. V.K.41, the critical consideration regarding biological impacts due to pollutant discharge to an aquatic system is not the mass load, but the extent to which discharges to the system serve to increase contaminant concentrations. A toxicological effect is inferred if contaminant concentrations increase to the extent that the survival, growth, and/or reproduction of sensitive species in the habitat are threatened, or if contaminant concentrations increase to the point that the allowable margin of error for estimates of the effects of the contaminants is exceeded.

#### *Deep Water Effects of Treated Effluent*

Table V.K.5, p. V.K.43, in the SEIR contains a comparison of the existing pollutant concentrations in the Southeast Plant deepwater outfall effluent with ambient water quality criteria. This comparison is conservative, as explained on p. V.K.41, which states,

The estimated contaminant concentrations are compared to water quality screening values to determine whether the concentrations in the current waste stream have any toxicological effects on aquatic or benthic organisms, and thus to provide a framework for consideration of whether a 2% to 3% increase in the volume of this waste stream would have any such effects. The water quality screening values are either the Water Quality Objectives (WQOs) adopted by the RWQCB, or where WQOs from the RWQCB are unavailable, U.S. EPA National Ambient Water Quality Criteria for the protection of salt-water aquatic life are used. WQOs are the “target” Bay-wide, open-water concentrations that the RWQCB has determined are suitable for maintaining beneficial uses./22/ WQOs are not used as discharge criteria. Near-shore stormwater discharges relate to WQOs in the sense that existing ambient pollutant concentrations in open-Bay waters are the result of long-term integration by the Bay ecosystem of natural inputs, industrial, domestic and urban discharges, atmospheric deposition, stormwater discharges, and a variety of other inputs.

Therefore, this direct comparison of municipal wastewater effluent to WQOs is extremely conservative.

Pollutant concentrations are less than the criteria, usually by a wide margin. This would remain true for the two mitigation scenarios. Thus, deep water discharge of treated municipal wastewater from the proposed project or the mitigation scenarios would not be expected to have an adverse effect on estuarine life.

#### *Near-Shore Effects*

As explained under “Near-Shore Effects” on p. V.K.42, the potential impacts of shoreline discharges of stormwater and treated CSOs on water quality in San Francisco Bay are estimated by evaluating the potential impacts of near-shore discharges on the biota of the Bay in the immediate vicinity of the discharges. These estimates represent a worst-case scenario because evaluations of potential effects in the immediate vicinity of the discharge (i.e., in the mouth of the discharge pipe) do not take into account the dilution and mixing that occur as flowing stormwater enters Bay waters. The effects of the Mitigation Scenarios are evaluated below in the same context.

The SEIR (on pp. V.K.43-V.K.46) discusses the effects of existing and projected future CSOs on near-shore waters and concludes that with the exception of the estimated concentrations of copper, silver, cyanide, and zinc, total pollutant concentrations in near-shore waters would not be above levels that cause toxicity in aquatic organisms. For more information, refer to the responses regarding “Water Quality Criteria” on pp. XII.334-XII.349. When the fact is considered that only a portion of these pollutants would be dissolved and bioavailable, only copper and cyanide would be above the lower observed threshold of aquatic toxicity. In the Bay, mixing and dilution would occur, so that these criteria are applied in this analysis only as a conservative yardstick. The CSOs are an existing condition; the project’s effects would increase the duration of each overflow event by several minutes and increase the overflow volume by about 0.2% annually. Therefore, the project would not be expected to materially affect the concentration of copper or cyanide (or any other pollutant) in treated CSOs. The project effect would not be a significant impact.

Under Mitigation Scenario A there would be no increase in the volume of CSOs, and no increase in pollutant load or concentration in near-shore waters. Therefore, this scenario would produce no CSO-related adverse impacts on near-shore waters.

Under Mitigation Scenario B, the volume of CSOs would be decreased by 33 MG/year or 3.6%, because most of Mission Bay’s stormwater runoff would be discharged directly to the Bay. Pollutant



loads discharged in CSOs would also be decreased by 3.6%. Concentrations of pollutants in the reduced CSO discharge volumes would not be affected. Thus, Mitigation Scenario B would have no CSO-related adverse effect on near-shore water quality.

Turning to stormwater discharges, the SEIR (pp. V.K.46-V.K.48) discusses the effects of stormwater discharges on near-shore waters and concludes that, with the exception of copper and zinc, even in the worst case scenario, total pollutant concentrations in near-shore waters would not exceed levels that cause toxicity in aquatic organisms. When the fact is considered that only a portion of the copper and zinc would be dissolved and bioavailable, only copper would be above the lower observed threshold of aquatic toxicity. In the context of the project, initial runoff flows from all storms would be captured and treated; thus stormwater would generally not be discharged during smaller storms. Project-related stormwater would be released only as a result of larger storms as a means of alleviating possible CSOs. Therefore, project-related stormwater runoff would occur only when CSOs are likely (i.e., an average of approximately 10 times per year).

On p. V.K.47, the Draft SEIR incorrectly stated the frequency of project-related stormwater discharges as approximately 4 instead of approximately 10 (the estimated number of CSOs that would continue to occur at China Basin Channel). For this reason, the second to last sentence on p. V.K.47 has been changed as follows:

**Stormwater runoff from the project would occur only an average of approximately 10 -4 times per year.**

Under Mitigated Alternative A, vortex separators or similar devices would be used to remove some contaminants from stormwater. They would be expected to remove 20% and 36% of the total copper and zinc, respectively. On the other hand, because the vortex separators or similar devices would only affect pollutants associated with particulates, they would not have a substantial effect on the concentrations of dissolved copper and zinc. Since the immediate discharge of dissolved copper and zinc would not be affected by the vortex separators, the potential acute toxic effects of Mitigation Scenario A would be approximately the same as that predicted for the project; that is to say, the short-term and intermittent release of dissolved copper and zinc from stormwater would not result in significant toxic effects on the near-shore environment of San Francisco Bay. Therefore, the potential acute toxicity effects of Mitigation Scenario A would be the same as the project's, and they would not be significant, as explained on p. V.K.48.

Under Mitigation Scenario B, the volume of stormwater discharged directly to near-shore waters of the Bay would increase to almost 7 times baseline conditions, and loadings of certain pollutants would

increase, despite partial removal by vortex separators or similar devices before discharge. Pollutant loads from stormwater would increase to 3 to 10 times baseline conditions depending on the pollutant, but this increase would be partially offset by a decrease in pollutant loads from CSOs. For example, the copper load in Project Area stormwater would go increase by about 20 lb/yr, but the copper load in Bayside CSOs would decrease by about 11 lb/yr. The zinc load in Project Area stormwater would increase by about 20 lb/yr, but the copper load in Bayside CSOs would go decrease by about 11 lb/yr. See Tables XII.8 and XII.9. The key factor is that the concentrations of dissolved pollutants would not change because the vortex separators or similar devices would not affect the concentrations of dissolved metals.

Stormwater discharge under Mitigation Scenario B would occur with every storm that produces runoff. (Most cities bordering San Francisco Bay likewise discharge stormwater during every storm of sufficient volume to produce runoff.) Thus, stormwater discharge frequency and volume would be greater under Mitigation Scenario B than for the project or for Mitigation Scenario A. However, rains in San Francisco are typically short-term and episodic; runoff from storms is occasional and typically lasts for a short period of time (e.g., two to three days and periods of peak flows would be much shorter). Under such conditions, aquatic organisms would not be exposed to undiluted or relatively undiluted stormwater discharges for sufficient time to cause substantial adverse effects. (A study of continuous dye releases upstream of CSO points in China Basin Channel during storms showed that a 10:1 dilution was achieved by the time a sample dye reached the Third Street bridge, and that within 11 hours after dye release, dilutions within the Channel were 100:1./23/) During storms there is additional mixing and dilution due to wind and turbulent waters. Thus, despite the increased frequency of stormwater discharges, Mitigation Scenario B would not cause chronic toxicological effects.

#### *Effects of Pollutant Loads on Sediment Quality*

Under “Effects of Mass Pollutant Emissions on Sediment Quality” on pp. V.K.48 and V.K.49, the SEIR evaluates the effects of pollutant loads on sediment quality in China Basin Channel and Islais Creek. As explained on p. V.K.49, the important factor to benthic organisms, which live in the top layer of sediment, is the concentration and bioavailability of pollutants in the freshly deposited materials. Under the project, settleable particulate matter derived from CSOs and stormwater discharges and deposited in China Basin Channel and Islais Creek, for example, would be expected to be similar in pollutant load and chemical characteristics to sediments deposited in recent years from CSOs. Sediment quality in such areas would be expected to remain similar to, if not the same as, that in sediment layers deposited in recent years. Organisms that live in such areas of sediment accumulation are well-adapted to a changeable sedimentary environment, burrowing upward, abandoning previously deposited sediments, and carrying out their vital functions in the top few



millimeters or centimeters of newly deposited sediment; therefore, the project would not have a significant impact on sediment quality in either channel.

Under Mitigation Scenario A, there would be a decrease in CSO volumes to China Basin Channel. (Under the project, the volume of CSOs would decrease in China Basin Channel, albeit less than with Mitigation Scenario A, but increase in Islais Creek.) Under Mitigation Scenario A, the stormwater discharges to China Basin Channel would receive vortex (or similar) treatment. Therefore, less particulates would be deposited in China Basin Channel than under the project, and under the same analysis that the project would not have significant effects in either channel, Mitigation Scenario A would have no significant impacts on sediment quality in either channel.

Mitigation Scenario B would decrease CSOs compared to the project. The volume of stormwater discharges to China Basin Channel would be higher than under the Base Case or the project, but these discharges would receive vortex (or similar) treatment, which would remove a portion of the pollutants associated with the particulate fraction. As explained on p. V.K.49, the important factor is the *concentration* of pollutants in the deposited materials. Under Mitigation Scenario B, the freshly laden sediment quality would be no worse than sediment under the project. Therefore, Mitigation Scenario B would have no significant impacts on sediment quality.

The amount of settleable material discharged under both Mitigation Scenarios would be roughly equivalent. Compared to the project, Mitigation Scenario A would not substantially change the amount of total suspended solids discharged in CSOs, but Mitigation Scenario B would reduce them by about 20,000 lb/yr. As for stormwater discharges, Mitigation Scenario A would reduce discharges of total suspended solids by less than 3,000 lb/yr, but Mitigation Scenario B would increase them by about 20,000 lb/yr. Therefore, when considering all near-shore discharges together, the difference would be inconsequential.

#### *Effects on Water-Contact Recreation*

The SEIR evaluates the potential effects of the project on water-contact recreation on pp. V.K.49 and V.K.50. The Bayside Planning Model shows that the project would cause the average duration of treated CSOs at the Channel CSO facilities to decrease by about 0.4 hour per year, or about 2.4 minutes per overflow (24 minutes divided by 10 overflows), and to increase at the Mariposa and Islais Creek facilities by 1.5 and 1.8 hours, respectively (or about 9 minutes and 11 minutes per CSO event). As explained in the SEIR, the project would cause no significant impacts on water-contact recreation.

Under Mitigation Scenario A, there would be a decrease in CSO discharges compared with the project, and therefore, no additional times when CSOs would occur compared with the project. Similarly, there would be no increase in stormwater discharges compared with the project. Therefore, this scenario would have no impact on water-contact recreation.

Mitigation Scenario B would reduce CSO discharges compared with the project and, therefore, cause no additional CSO-related effects on water-contact recreation. On the other hand, the volume of stormwater discharges to China Basin Channel would be higher than under the Base Case or the project, although these discharges would receive vortex (or similar) treatment. In removing some of the settleable solids from the stormwater, the vortex would also remove some of the bacteria. Some bacteria would also pass through the vortex and be discharged along with the stormwater.

As discussed in the response regarding “Water-Contact Recreation” on pp. XII.354-XII.357, relatively little water-contact recreation presently occurs in the vicinity of the Project Area, including China Basin Channel, although some individuals have been known to swim in the area. The Project Area is not monitored for coliform levels, and there are no public beaches in the area; therefore, the Project Area is not subject to beach postings. Stormwater is currently discharged from the Project Area, as discussed on pp. V.K.2-V.K.4. Current stormwater regulations under the Clean Water Act do not require coliform monitoring.

As discussed in the response regarding “Pathogenic Bacterial Contamination” on pp. XII.350-XII.354, total coliform counts are used as a general indicator of bacterial quality. The Basin Plan defines objectives for total and fecal coliform bacteria for water-contact recreation./24/ Fecal coliform tests count organisms present in the enteric systems of warm-blooded animals. Total coliform tests count some organisms naturally occurring in soil and water in addition to those from warm-blooded animals. Coliform bacteria are generally harmless, but fecal coliform are used as an indicator of sewage contamination, signaling the potential presence of harmful pathogenic organisms.

Because stormwater often is in contact with fecal matter from dogs, cats, pigeons, and other urban animals (as well as some humans) as it flows to sewer drains and surface waters, fecal coliform is routinely encountered in stormwater runoff from urban areas. Coliform levels in Santa Clara Valley streams have been found to be about 8 times greater during wet weather than during dry weather, indicating an increase in coliform levels as a result of stormwater runoff./25/ However, coliform levels are generally higher in sewage than in stormwater due to the much higher fraction of feces in sewage. For this reason, coliform levels in treated CSOs (which contain about 94% stormwater and 6% sanitary sewage) are believed to contain higher levels of coliform bacteria than stormwater.



The coliform bacteria found in sewage also tends to contain higher levels of human pathogens than those in stormwater because the sewage coliforms are primarily associated with human waste, whereas stormwater coliforms are primarily not associated with human waste. Although human diseases can be transmitted through non-human species, the tendency for human disease-causing organisms to be present in human waste is greater than the tendency for human pathogens to be present in non-human waste. Because CSOs are about 6% sanitary sewage, they may contain higher levels of human pathogens than stormwater. Nevertheless, human disease has been observed in areas contaminated by stormwater runoff./26/

As shown in Table XII.7, Mitigation Scenario B would result in 91 MG/yr more direct stormwater discharges and 35 MG/yr less treated CSO discharges when compared to the project. Because only about 6% of the treated CSO volumes would originate from sanitary sewage and about 94% would originate from stormwater, the 35 MG/yr reduction in CSO discharges would be made up of roughly 33 MG/yr stormwater and 2 MG/yr sanitary sewage. The net effect would be that Mitigation Scenario B would increase stormwater discharges by about 58 MG/yr and decrease treated sanitary sewage discharges by about 2 MG/yr.

As mentioned above, the Project Area hosts little water-contact recreation, and water-contact recreation is especially uncommon during and after rainfall; therefore, Mitigation Scenario B would not adversely affect water-contact recreation near the Project Area. Water-contact recreation that may occur despite rainfall or stormy weather, such as surfing and windsurfing, does not generally take place near the Project Area due to a lack of favorable conditions. When compared to the Base Case, the project, and Mitigation Scenario A, the greater reduction in the treated sanitary sewage portion of CSOs from Mitigation Scenario B could somewhat improve conditions for water-contact recreation in the vicinity of CSO discharges. Near the Project Area, these potential benefits may be off-set by the increased stormwater flows.

#### Cumulative Issues

The SEIR evaluates the cumulative issues associated with the project and water quality on pp. V.K.50-V.K.55. The SEIR concludes that although the analysis does not demonstrate any significant cumulative impacts, due to concerns about CSOs and to acknowledge the lack of conclusive evidence refuting a causal relationship between treated CSOs, stormwater discharges, and sediment quality, the SEIR conservatively finds that the project would contribute to a potentially significant cumulative impact on near-shore waters of San Francisco Bay from treated CSOs, and direct stormwater discharges to China Basin Channel. However, with the imposition of Mitigation Measures K.3 and K.4 on p. VI.47, this impact would be reduced to a level of insignificance. Since Mitigation Scenarios

A and B incorporate Mitigation Measures K.3 and K.4, and are analyzed above and determined to not cause significant new impacts, they would also not have significant new cumulative impacts.

#### Conclusions Regarding Mitigation Scenarios

The analysis above demonstrates that Mitigation Scenarios A and B would both meet or exceed the performance criterion provided by Mitigation Measures K.3 and K.4 using different strategies. No new or substantially increased significant environmental impacts have been identified in either case. Each approach results in relatively minor water quality differences. These differences would relate to total pollutant loads, not soluble pollutant concentrations that relate most directly to acute aquatic toxicity. Both would eliminate increases in overflows and would treat stormwater discharges. The differences would, depending on the pollutant considered, involve relatively small increases or decreases in total pollutant loads from the project to the deep waters of the Bay and the near-shore environment. Even with mitigation, the project could result in changes in total pollutant loads that could affect the overall levels of pollutants in the Channel and Bay, although the changes would probably be immeasurably small compared to existing pollutant levels. Project decision-makers may consider Mitigation Scenarios A and B as specific mitigation options for implementing Mitigation Measures K.3 and K.4. Other mitigation options could also be considered. In any case, by evaluating two different approaches to project mitigation, the analysis above illustrates a range of effects that could be anticipated, depending on how Mitigation Measures K.3 and K.4 would be implemented.

In comparing Mitigation Scenarios A and B to the proposed project, Mitigation Scenario A would increase treated effluent, reduce CSOs, and treat stormwater. It does not increase the volume of stormwater discharges. Mitigation Scenario A would reduce to a less than significant level the project's contribution to cumulative impacts and would lessen the non-significant effects of the project. Mitigation Scenario B would decrease treated effluent, decrease CSOs, and increase stormwater discharges, compared to the project. Under Mitigation Scenario B, stormwater would be treated, but would increase annual average pollutant loads to the nearshore waters and increase the frequency of stormwater discharges from an average of about 10 per year to every rainfall. As discussed above, the increased stormwater discharges would have no significant effects on water quality, aquatic biota, sediment quality, water-contact recreation, or other beneficial uses. By decreasing CSOs and treating stormwater discharges, Mitigation Scenario B would reduce to a less than significant level the project's contribution to cumulative impacts.

In summary, although Mitigation Scenario A would increase effluent flows to deep waters by about 2 MG/yr compared to the project and Mitigation Scenario B would decrease them by 53 MG/yr, these differences represent changes of less than 0.2% from unmitigated project flows. Regarding near-shore



discharges, Mitigation Scenario B would reduce CSO volumes compared to the project about 33 MG/yr more than would Mitigation Scenario A. Because treated CSOs originally contain roughly 6% sanitary sewage, Mitigation Scenario B would reduce discharges of this sanitary sewage about 2 MG/yr more than would Mitigation Scenario A. Mitigation Scenario B would increase direct stormwater discharges to near-shore waters about 91 MG/yr as compared to both the project and Mitigation Scenario A. When the near-shore discharges of CSOs and stormwater are considered together, Mitigation Scenario B would increase direct near-shore discharges by about 56 MG/yr compared to the project, whereas Mitigation Scenario A would reduce them by about 2 MG/yr.

Neither Mitigation Scenarios A nor B would have a significant impact on water-contact recreation. Neither Mitigation Scenario would affect the concentrations of dissolved pollutants in the wastewater streams, but Mitigation Scenario A would decrease total copper loads to near-shore waters by about 1.5 lb/yr, whereas Mitigation Scenario B would increase total copper loads to these waters by about 8.1 lb/yr. Similarly, Mitigation Scenario A would decrease total zinc loads to near-shore waters by about 15 lb/yr, whereas Mitigation Scenario B would increase total copper loads by about 1.2 lb/yr. Both scenarios would include vortex technology to reduce settleable solids, and neither would substantially affect sediment quality. The amount of settleable material discharged under both scenarios would be roughly equivalent.

## **Crosstown Tunnel**

### ***Comments***

[T]here seems to be an oversight in Figure J.1, of Volume III. The map of San Francisco, which illustrates the Cities' waste treatment system shows a "Cross Town Tunnel (not yet scheduled for construction)." The Board of Supervisors has stated in a resolution last year that this is no longer a feasible solution to expanding the system and that the city will not be considering this option in the future. Therefore, it should be removed from the figure and any reference to it omitted. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

We have been working for four years to stop the cross-town tunnel because we think there are better ways to solve the problem of the Bay side.

So imagine our surprise when we saw in the smallest way possible, not yet scheduled for construction. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

And first I'd like to also state the oversight of the cross-town tunnel being in the report in Figure J-1, very back end of the third volume.

This needs to be taken out of the project, of course, since the board has already stated in the resolution that this is no longer a viable option as a treatment solution in San Francisco. (*Mike Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

### ***Response***

These comments recommend revising Figure J.1 on p. J.2 of Appendix J, Hydrology and Water Quality, to eliminate the reference to a cross-town tunnel. The *San Francisco Wastewater Master Plan* includes a cross-town tunnel to transport wastewater from the Bayside to the oceanside. In 1974, when the Wastewater Master Plan was adopted, wastewater discharge standards were changing rapidly, and the City believed future restrictions on wastewater discharges to the Bay could necessitate this major capital project. However, the Regional Water Quality Control Board never required the construction of the tunnel as a National Pollutant Discharge Elimination System (NPDES) permit requirement, and San Francisco now complies with its NPDES permit requirements. See also the responses regarding “Background Regarding the Existing Combined Sewer System” on pp. XII.232-XII.238 and “Wet-Weather NPDES Permit” on pp. XII.371-XII.376. The San Francisco Board of Supervisors has not adopted formal legislation to remove the cross-town tunnel from the Wastewater Master Plan, but the tunnel is no longer considered a foreseeable option for future wastewater management./27/ As discussed in the response regarding “New Water Quality Standards” on p. XII.371, future changes to discharge standards cannot be anticipated; however, if new standards are ever promulgated that substantially affect the City’s ability to discharge wastewater to the Bay, the City would likely study reasonable options and alternatives to achieve the new discharge requirements at that time. Because the cross-town tunnel is no longer reasonably foreseeable, Figure J.1 has been revised as shown on the next page to remove the reference to it.

### **Brown and Caldwell (Crites) Report**

#### Alternative Technologies that Prevent Pathogens and Contamination of Fish

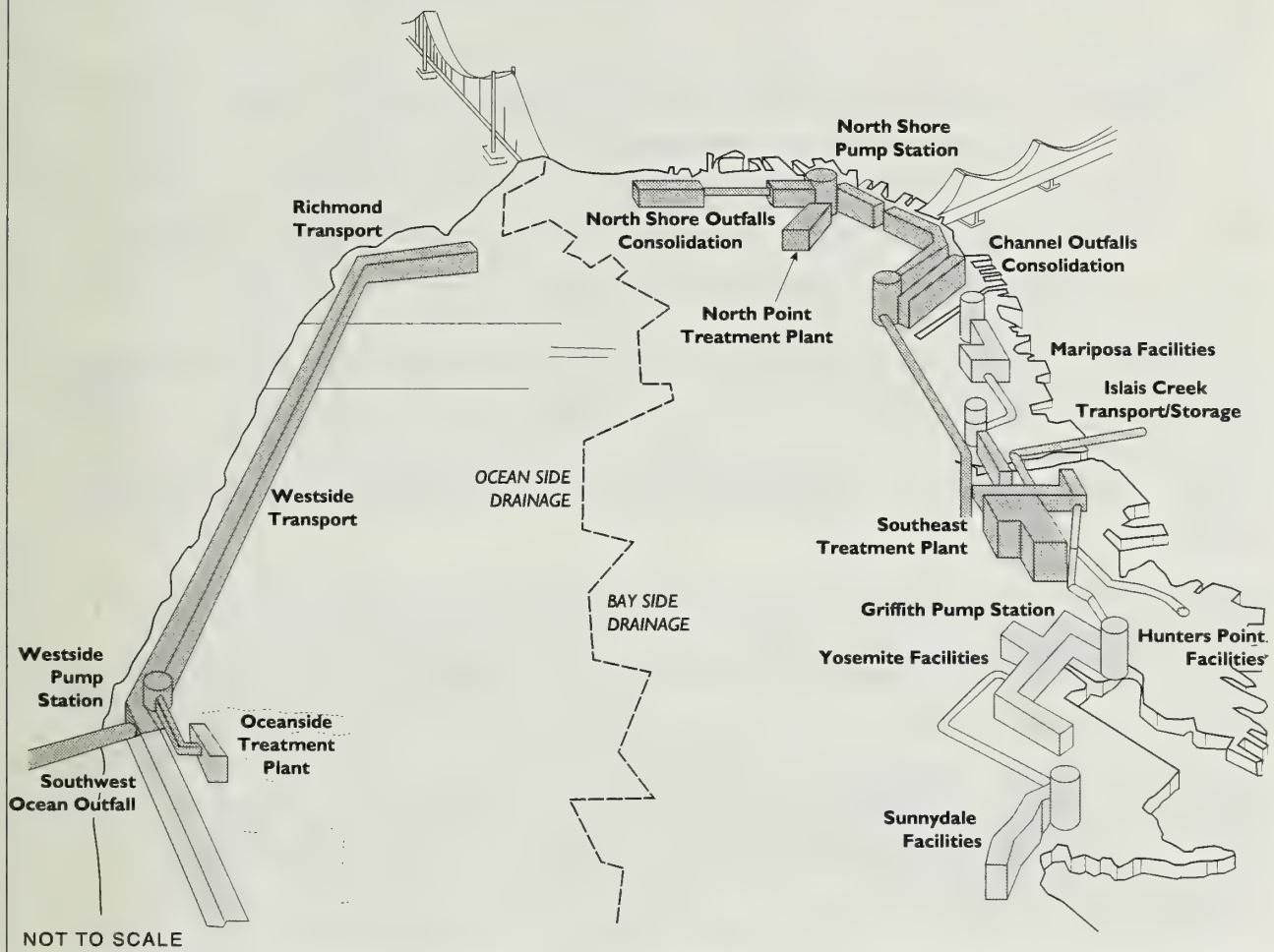
### ***Comments***

Ron Crites’s “Preliminary Screening of Alternative Wastewater and Stormwater Management Technologies,” is unfortunately short sighted in alternatives, especially dealing with pathogens and toxic contamination. Alternatives need to include technologies that prevent pathogens from entering the bay and creeks to protect human health and the aquatic environment. Only this will ensure that Bay fish are not contaminated with mercury, dioxin, PCBs, and silver. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

### ***Response***

The SEIR analysis finds no significant adverse effect from the project with respect to pathogens, human health, or Bay fish contamination. No substantial evidence has been received during the SEIR’s review period that a significant impact would occur. Therefore, alternatives that would prevent pathogens from entering the Bay are not warranted for the project.





SOURCE: San Francisco Public Utilities Commission, 1997.

**MISSION BAY SUBSEQUENT EIR**

**FIGURE J.1 (REVISED) SAN FRANCISCO CLEAN WATER PROGRAM  
COMBINED SEWER SYSTEM CONCEPTUAL DIAGRAM**

The Brown and Caldwell Report was prepared for the San Francisco Public Utilities Commission (SFPUC) independently of the environmental review process for the Mission Bay project. Comments and other concerns on the Brown and Caldwell Report should be addressed to the SFPUC. See the response regarding “Adequacy of Information about Project Wastewater Options,” pp. XII.280 - XII.289 for further discussion of the purpose of the Brown and Caldwell report. Pathogens are a source of concern because they are associated with human disease. Pathogens are found in sanitary sewage that has not undergone disinfection. Because CSOs contain some portion of non-disinfected sanitary sewage and stormwater generally does not, CSOs are one source of pathogens in receiving waters. The implementation of alternative technologies for stormwater management would not be effective at controlling pathogens. See the response regarding “Alternative Technologies for Stormwater and Combined Sewer Overflows” on p. XII.299. The SEIR discusses changes in Bay pathogen levels as they relate to combined sewer overflows and how such changes could affect water-contact recreation (see “Volume and Quality of Treated Combined Sewer Overflows,” p. V.K.36, and “Effects on Water-Contact Recreation,” p. V.K.54). Also see the responses regarding “Pathogenic Bacterial Contamination” on pp. XII.350-XII.354 and “Consumption of Bay Fish” on pp. XII.389-XII.392.

To the extent that CSOs contribute to pathogen levels in the Bay, Mitigation Measure K.3 would reduce the project’s future CSO discharge contribution to zero, which could be achieved through storage, detention, or other means. To the extent that stormwater discharges could contribute to near-shore pollutant loading, Mitigation Measure K.4 would implement alternative technologies to reduce settleable solids and floatables in stormwater discharges to China Basin Channel. See also the responses regarding “Illustrative Mitigation Scenarios” on pp. XII.253-XII.277, and “Stormwater Treatment” on pp. XII.291-XII.294.

#### Adequacy of Information about Project Wastewater Options

##### *Comments*

The CH2M Hill study referenced on p. V.K.28 as identifying “. . .the full range of alternative technologies available” has been criticized as inadequate by the San Francisco PUC’s Technical Review Committee (made up of internationally respected environmental engineers and scientists)<sup>1</sup>. They have recommended a much expanded study lead by an engineer with proven expertise in alternatives. Reliance on the CH2M HILL study ignores a large number of feasible wastewater alternatives.

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<sup>1</sup> July 12, 1997 memo from Prof. David Jenkins to Steve Ritchie

*(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer’s letter])*



The CH2M HILL study referenced on p. V.K.28 as identifying “. . .the full range of alternative technologies available” has been criticized as inadequate by the San Francisco PUC’s Technical Review Committee (made up of internationally respected environmental engineers and scientists). (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer’s letter]*)

Having been given an extra two weeks on the deadline for written comments, for which we thank the Planning Commission and the Redevelopment Agency Commission, the Toxics subcommittee has reviewed the “Technical Report - Preliminary Screening of Alternative Wastewater and Stormwater Management Technologies - Mission Bay Project” (the Technical Report) of the PUC’s technical consultant, Ron Crites of Brown & Caldwell. We also attended a Wastewater CAC meeting on June 2, 1998 at which the report was presented by Mr. Crites and discussed by the Chair of the PUC’s Technical Review Committee. The subcommittee has determined that:

The Technical Report represents the beginning of a comprehensive study of alternative wastewater solutions for bayside discharges. When that study is completed, the PUC will be in a position to evaluate the best alternatives to reduce discharges of pollutants to San Francisco Bay. In the meantime, it provides a tremendous opportunity to incorporate alternative technologies into the Mission Bay planning process. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

We believe this SEIR is seriously deficient in providing critical information needed to accurately assess its impact, or needed mitigations. Critical information is still not available to the public. The process and timeline by the City PUC has been not only inadequate, but seems designed to hamper proper public input and review of important information. . . .

There has been a bad faith refusal by the City PUC to address these issues by looking a full fledged alternative wastewater options for this project, not just token, “alternative” window dressing on the proposed plan. They have ignored or improperly constrained the clear-cut will of a large collection of citizen groups concerns, from Bayview, to Bernal Heights to the Sunset, from various environmental groups like Baykeeper, civic groups like S.F. Tomorrow, and Bay and Ocean users like Surfriders and S.A.F.E.R., representing those who fish for food in the Bay, to look fully at the City’s possible options. They have ignored or improperly constrained the clear-cut instructions of the Board of Supervisors to look fully at these issues and possible options.

It is our view that it should be withdrawn, and recirculated with the additional necessary information and adequate time, for public review in order to best ascertain this project’s potential impacts and ways of mitigating them. Further there should be a full-fledged good effort by City staff to address the above issues and have the decency to allow these options to be put before the public and City decision-makers. . .

The SEIR process so far has been inadequate in that it has not allowed proper time [for] the consultant on alternative wastewater options to issue a final report. The consultant has been improperly constricted from delivering a full report. The process has denied the public adequate input and access to information.

The SEIR process so far has been inadequate in that it has not allowed proper time [for] the consultant on alternative wastewater options to issue a final report:

Mr. Crites, the PUC's consultant on alternative wastewater was hired very late in the process. I believe he did not get a final o.k. to begin until late March. The Draft SEIR was published 2 or 3 weeks later. The public requested that the PUC hire him in Early October of 1997. Regardless of the reasons why this took so long, the public requested that the Planning Department delay the publication of the EIR until Mr. Crites was on board, had the minimum of 8 weeks he requested to deliver a draft report, so that it could be included in the widely circulated draft. This request was communicated [to] the PUC by a letter from the Alliance for a Clean Waterfront on January 15th. (Attachment #1, enclosed) This request was repeated and put before representatives of the Planning Department, the PUC, and the Mayor's office at a meeting of the Mission Bay CAC Subcommittee on Toxics and Wastewater at a meeting in March, prior to the publication of the Draft SEIR. At a subsequent meeting in April of this committee, just after publication of the SEIR, in early April (I believe it was April 13, or 20) we again requested a delay, this time of the Public Hearing and written deadline so that the Public could review the report before the hearing and written comment deadline. Again, our request was turned down.

In addition both the Commission on the Environment and the Board of Supervisors passed resolutions urging the PUC to conduct a "timely" and comprehensive look at the use of alternatives for the big new bayside development in light of the fact that Bayview community had received a disproportionate [share] of the burden of the City's wastewater system. The Commission passed its recommendations in February, 1998; the Board passed its resolution on March 20, 1998. (attachment #2)

Neither the publication of the SEIR, nor the Public hearing was delayed to fit in Mr. Crites' draft report.

In fact the consultant was given another job by the PUC that slowed him down even further during this critical time period. No effort was made to give him additional resources in order to proceed on both projects simultaneously. Further, his draft report was requested by the PUC to be completed by May 22, 1998 - the Friday before Memorial Weekend, with the original close of Written comment on Tuesday May 26. A first meeting of the Technical Review Panel was scheduled for June 2 - after the original written deadline.

The final deadline for written comment was delayed for. . .two weeks until today June 9, 1998 only because of the urgent request by the various members of the public to the Planning and Redevelopment Commissions at the May 12 Public Hearing. We requested the delay until such time as the consultant could complete his draft, the Technical Review Committee, chosen by mutual negotiation by the Public and City staff (see enclosed attachment #3), had adequate time to meet and review relevant materials, and include time for the previous precedent of a public meeting for input on both the draft and the TRC review. The mere two week fixed extension has proven inadequate to provide even the minimum amount of time needed for a TRC review, public input and final report. The public was only given access to the draft one day before the meeting of the TRC thus hampering the public ability to provide meaningful input to the process. The TRC was unable to perform under this ridiculously short timeline. There will still be no final report until after the written deadline.



The “alternative” consultant’s report should have significant and relevant material - important to the full decision-making process of the SEIR process. The “alternative” consultant’s report was improperly proscribed. He said the TRC should reissue a new draft that allows him to address the full range of issues necessary, with adequate time and full public input.

At a minimum Mr. Crites’ report, with TRC review, should bear significantly on the possible mitigations that may be recommended for wastewater issues. As pointed out in comment letter by Trent Orr for Mission Creek Conservancy, the Comment letter from Mike Thomas, et. al. from the S.A.F.E.R. project, and the letter from Urban Ecology, the Mitigation section is vague, unspecific, and with the “or” word, subject to a wide and unknown range of possible scenarios.

Mr. Crites draft report, was issued in the last week before written deadline, and only one day before the public had any access to an improperly noticed meeting on the subject. (see attachment 4: no mention of the presence of the TRC or the possibility to discuss the report with them). . . .

The public found that the report itself was severely and improperly constricted. Once again, a large contingent of citizen groups requested the alternative consultant be hired to look at Mission Bay, in conjunction with the TRC and the TRC outline for a serious study of alternative issues. Recognizing that this was not the full bayside watershed study that the public and the Board and the Commission on the Environment had repeatedly requested, there was the clear desire to see if a full-fledged use of alternative wastewater options could be deployed to take care of wastewater that would be generated by this project. Again, the Commission and the Board passed resolutions urging a full study of alternative options for the big new bayside development, with full consideration of the implications of cumulative development and the issue of disproportionate burden on the Bayview/Hunters Point community. (see again attachment 2 Board Resolution 249-980)

On May 18 we requested of Michael Carlin of the PUC to see the PUC’s instruction to the TRC and Mr. Crites. We were faxed a memo to the TRC and Mr. Crites proposal to the PUC in response. I put in several calls to Mr. Carlin, pointing out that he had sent me Mr. Crites’ proposal. At the June 2 meeting Mr. Crites informed me that they had accepted his proposal with the amended task orders (see attachment 5). While we find this document to be short of what we the public, and the Commission, and the Supervisors requested, we find that his report falls short of even his scope of services as listed in his proposal, and was sent to us by the PUC in response to our request to them on their instructions to Mr. Crites.

#### The Draft Report Falls Short of the Scope of Work

The report was to include review by the TRC (Technical Review Committee) and the outline they generated in July, 1998 attached to Mr. Crites draft report. (our attachment 6, note 1 at page of the TRC outline published last year vs. the 1st page of the outline submitted with the Crites draft report)

From Attachment 5: Crites Scope of Work:

“Our. . . scope includes an array of options for watershed stormwater management, decentralized wastewater management, wastewater treatment, water reuse, and recycling. . .

“Technologies will be evaluated for their capability to reduce pollutant mass loading to the bay, minimize or eliminate combined sewer overflows[,] optimize water reuse for environmental enhancement/sustainability, and be complementary to existing PUC planning efforts and priorities. . .

“The Mission Bay redevelopment affords the opportunity to evaluate different water reuse, stormwater treatment, and management options. . .

“Stormwater and combined sewer technologies will be evaluated for appropriateness to the situation, ability to reduce peak flows and loads on the Southeast Water Pollution Control Plant (Southeast Plant) and the potential to reduce or eliminate CSO’s. . .

“ . . .will focus on both reducing wastewater and solids on the Southeast Plant and creating nonpotable water supply for the eastern bayside portion of the City. . .

“ . . .review the project proponents approach to wastewater management including collection, treatment, and reuse. . .

“ . . .review the TRC list. . .and evaluate potential methods. . .

“ . . .estimate costs and effectiveness of the proposed and alternative stormwater management techniques. . .

“Attend TRC Meetings. . .compare the TRC list with the proponents approach to wastewater and stormwater management. . .present analysis of alternatives for wastewater and stormwater. . .

“ . . .respond to issues which may arise in TRC meetings, scope additional evaluations and analysis. . .

“ . . .after considering the TRC’s comments, the draft report will be revised with input from the staff and interested citizen’s group, and a final report will be prepared. . .”

Instead what we got was “Ron Crites in a box.” When the draft report was issued one day before the public meeting, we read that the report:

From Crites Draft Report:

“ . . .The scope of the report is to review the Mission Bay project and to evaluate potential mitigation measures for the project

“ . . .The purpose of the report is to provide an array of alternatives for wastewater and stormwater to comply with mitigation measures

“ . . .the report is not to recommend a specific technology or management plan but to narrow a list. . .

“ . . .the report does not assess feasibility based on the entire range of issues that the City must ultimately consider, such as social, political, economic, and legal factors. . .

“ . . .alternatives are evaluated solely for their ability to produce recycled water and not as an alternative to treatment at the southeast Treatment Plant. . .

“ . . .no attempt has been made to make recommendations for the use of a specific technology. . .

Many of the factors recommended in the TRC outline of July 1998 that was used for a reference were ignored by this improperly limited scope. Of major importance was listed on page 1 item 1.C.2.

“Minimize adverse environmental impacts to San Francisco neighborhoods and San Francisco Bay Region.” Inexplicably, the line about neighborhoods was dropped out so that the TRC outline submitted with Ron Crites’ report read “1.C.2. “Minimize adverse environmental impacts to San Francisco”-end of sentence. Indeed this omission whether by design or mistake is the crux of one of the key issues. . . .

We insist that the alternative consultant be allowed to fully discuss options in line with the Board’s most recent unanimous resolution (enclosed) 249-98, the clear message from the limited, rushed, inadequate public meeting that was held on June 2, and the full set of factors outline by the TRC. That, combined with an adequate and reasonable timeline and process for both TRC and public input AND a recirculation of an amended factual basis with which to judge impacts, determine levels of



significance, and proscribe adequate mitigation would provide the City with a process that meets the public good, and CEQA. . . .

The process has denied the public adequate input and access to information, and the process was subject to several improper maneuvers by the PUC to reduce public and alternative expert involvement.

The draft "alternative" report was not available in a timely fashion to us or the TRC.

The PUC improperly disinvited one of the key "alternative experts who had been on the TRC for 2 ½ years and was one of the choices negotiated by the public over 2 ½ years ago. The TRC was clearly a mutually agreed upon committee (see enclosed attachment, PUC EPA Grant Application.) To disinvite Dr. Middlebrooks, President of the American Academy of Environmental Engineers, without calling him, checking with other TRC members, or even notifying the public was a serious abrogation of previous agreements with the public, and the fact that they tried to sneak it by with no notice is the kind of maneuver that continues to anger citizens and destroys good faith, and reduces (see enclosures: Coalition letter to Dr. Middlebrooks, "Did You resign, were you notified. . .", Reply from Dr. Middlebrooks, No I didn't resign, yes I'm willing to serve", memo from Steve Ritchie, "we didn't invite him because he moved and he's retired, and we wanted to save money, attachment #7) Dr. Middlebrooks moved from Nevada to Colorado, he resigned his teaching post. He's still very active. He's been with the TRC since its inception. He was part of a mutually agreed panel. Four Supervisors had just told the PUC staff that they wanted more attention and resources paid to this issue - more, not less. Ammiano, Katz, Brown and Bierman at a May 14 Health, Family, and Environment Committee Hearing on Bayview Sewage Problems.

The public was denied access to the TRC afternoon deliberative session, despite a previous agreement with the TRC (see attached TRC letter and outline of July, 1998). While the responsibility for this goes back and forth, we had an agreement from the previous TRC meeting. We know Dr. Middlebrooks was left out of the decision. We called the other two "alternative experts when we heard that the previous agreement was not going to be honored. One was out of the country, the other disagreed with that decision and was never informed of that position.

The only meeting where the public had any access to the TRC was the June 2 meeting that was noticed only as a report by Mr. Crites to the CAC (Citizen Advisory Committee) on Wastewater. There was NO mention of the TRC being present.

That meeting, which was the only access was set for 5:30 pm on Election day making it hard for people who work 9-5 or 9-6 to make the meeting. People involved in electoral issues could not make it. This was an extremely poor choice for a date for the only, rushed opportunity for the public to have input. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

The SEIR states that "[t]he City and its technical consultant are currently conducting an independent assessment of. . . alternative [treatment] technologies, and their applicability to Mission Bay." Vol. II at V.K.28. As of the date of this comment letter, it is BayKeeper's understanding that not less than four technical reviewers (three retained by the City and one retained on behalf of the Mission Bay Citizens Advisory Committee) currently are analyzing the wastewater portions of the SEIR. The City's CEQA process must accommodate this important new information, both in terms of any responses as well as the length of the comment period. In particular, the public is entitled to a full 45 day period to review the technical consultants reports. Pub. Res. Code § 21092.1; 14 CCR § 15088.5. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

It appears to me that every effort is being made to put the Mission Bay Development (and possibly several other major developments) on a fast track that absolutely short circuits logic, reason and common sense. As a citizen of San Francisco I demand that the proper amount of time, attention is given, and reasonable studies and planning are carried out to insure that these developments do not have unnecessary and/or undue impacts on the environment and people of San Francisco and this region. Mishandling these projects and their attendant wastewater, sewage and all the other impacts could create decades of problems with huge costs to the taxpayers to fix these problems. With thorough and careful planning many could be mitigated to varying degrees.

Why is this plan - Why are ALL of these plans - being rushed so fast? We have a Board of Supervisors mandated Technical Review Committee retained by the City who have been hired to do a comprehensive study of environmentally sound alternatives to the current systems for wastewater and sewage. This group is made up of individuals having top flight national and international reputations. Why are they being put into the backwaters? Why are they not being given enough time to look at the plans, make a report and their recommendations, and allow the public to read their report and comment on it. This very capable group should be allowed to fully report, in an unfettered manner, on this development and its potential cumulative impacts. This would be a wise way to head into the future.

Mr. Ron Crites was hired by the city to look at the new development. He should be allowed the proper time and not be artificially limited as to scope to allow his report to be realistic and meaningful. Mr. Crites should be allowed to report whatever his expertise suggests on this development. The TRC should be allowed the time to absorb his study; Crites should have the time [to] study their final report. The people of San Francisco should have the time to read and study all of this very important information and time to give their input. *(Paul Hessinger, Coalition for Better Wastewater Solutions)*

The public has not had the benefit to review the comments of Ron Crites, technical consultant to the PUC, on the sewer and stormwater issues presented by the Project before commenting on these aspects of the project as presented by the SEIS/SEIR. The PUC and Mr. Crites have begun to study alternative wastewater treatment approaches for Bayside sewer and stormwater discharges, as requested by the Board of Supervisors. Only when that study is completed, will the PUC be able to determine the best means to reduce pollutant discharges from the Project as mandated by CEQA. The report will not be presented until June 2, 1998. *(Alex Lantsberg, Project Coordinator, Southeast Alliance for Environmental Justice)*

If the city is truly considering alternative wastewater treatment technologies for use in this project area as well as throughout the city, then I would like to see more detail of possible options. *(Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter)*

In terms of wastewater and stormwater planning, the SEIR is a document that, unfortunately, is becoming all [too] typical of such efforts when the subject area is the San Francisco Bay waterfront and environs. It is lacking in both substance and imagination, and while it can perhaps be argued that an EIR is not required to demonstrate imagination, this compilation is so thin in data and documentation that it fails to meet the most basic guidelines required by law of an EIR.

When the Wastewater and Stormwater TRC was first impaneled, the Draft Overview of Wastewater Management Alternatives for Reducing Pollutant Mass Discharge to the Bay, prepared for the San Francisco Public Utilities Commission by CH2MHill in March, 1997, and delivered to the TRC,



identified over 40 alternatives that could contribute to the stated goal of improving environmental quality on the Bayfront. It should be noted that this was only a preliminary list, and that the expectation at that time was that it would begin a comprehensive and wide-ranging gathering of as many pieces to the puzzle as could be found. (*Bill Wilson, Environmental Planning & Design*)

### ***Response***

These comments raise a number of issues about the adequacy of the Crites (Brown and Caldwell) report and the public input process regarding selecting wastewater treatment options for Mission Bay and for the Bayside. The issues raised include a concern that there may have been insufficient time given to Brown and Caldwell for preparation of the report; insufficient time for public review of and response to the report; a limit on the scope of the report to examining technologies for Mission Bay only, without examining the full range of technologies for the Bayside; and requests to delay the SEIR process because of new significant information about alternative technologies for Mission Bay. One comment alleges the SEIR is deficient due to lack of data and documentation.

As noted in the comments and acknowledged in the SEIR on p. V.K.27, the Board of Supervisors passed a resolution in late 1996 directing the San Francisco Public Utilities Commission (SFPUC) to study the feasibility of alternative wastewater treatment technologies for the Bayside. An April 1997 report prepared by CH2M Hill presented a compendium of various available technologies. As noted by one comment, that report provides the City with a starting point for consideration of the feasibility of those technologies. Because new development in the Bayside affords the most opportunity to implement alternative technologies, the SFPUC has chosen to evaluate the feasibility of these various technologies for applicability to each new major development as it is proposed. Thus, the report prepared by Brown and Caldwell focuses on applicability of the technologies to Mission Bay. Similar reports may be prepared for other major Bayside development projects.

The purpose of the Brown and Caldwell report is “not to recommend a specific technology or management plan but to narrow the list of appropriate technologies for wastewater recycling and reuse and for stormwater management.”/28/ This report was prepared independently of the SEIR, and is part of the City’s effort to prepare long-term strategic plans for future water pollution control activities, and respond to the Board of Supervisor’s resolution that alternative technologies be studied in more depth. The report may be useful to the City and the project sponsors, along with other studies or information illuminating the advantages and disadvantages of various specific wastewater management options for the project. Some options discussed in the report could serve to satisfy the performance criteria of Mitigation Measures K.3 or K.4, if these are adopted. However, the report and similar information in this document responding to requests and comments do not add new information about potential project impacts and do not suggest substantially different mitigation measures or project alternatives. Therefore, the Brown and Caldwell report does not constitute new significant information

that would require public recirculation of the SEIR or a delay so that it can be incorporated into the CEQA process.

The Brown and Caldwell report suggests further study of a number of potential options that the project could utilize to achieve the performance criterion set forth in Mitigation Measure K.4 of the SEIR; it does not recommend that particular, specific technologies be adopted for the Mission Bay project. Further, the report does not preclude other alternative technologies from being considered for application to Mission Bay. During the 20-year build-out of the Project Area, it is anticipated that technical advancement in alternative technologies would occur, and new technologies could be developed. As noted in one comment, the Brown and Caldwell report provides an opportunity to incorporate alternative technologies into the planning process for Mission Bay.

With regard to comments that an insufficient amount of time was given to Brown and Caldwell to write the report, and that the report should be rewritten, such comments should be directed to the SFPUC. The Brown and Caldwell report was finalized July 7, 1998, and includes a summary of comments by the SFPUC's Technical Review Committee (TRC). Again, this report was prepared independently of the SEIR in terms of scope, content, and deadlines.

If Mitigation Measure K.4 is made a condition of approval, the mitigation monitoring program adopted for the project would track the progress of the mitigation measure. The comment calling the mitigation section vague and unspecific because the Brown and Caldwell report has a significant bearing on the mitigations is addressed in Mitigation Measures, "Delay in Specification of Mitigation Measures," pp. XII.458-XII.460.

With regard to public participation as to how technologies would be selected for implementation at Mission Bay, there is no formal public process in place. The performance criterion in Mitigation Measure K.4, which calls for implementation of alternative technologies or other means to treat project-related stormwater discharges into China Basin Channel, is that the treatment effectiveness of those technologies must be equivalent to, or better than, the treatment effectiveness of the large-capacity box sewers from which CSOs are discharged. See the response regarding "Stormwater Treatment," pp. XII.291-XII.294, for additional discussion of the meaning of Mitigation Measure K.4. As discussed in the response in Mitigation Measures, "Approval and Implementation of Mitigation Measures," if Mitigation Measure K.4 is made a condition of approval on the project, Mitigation Measure K.4 would be included in the mitigation monitoring program, and the mitigation would be enforced by a City department or the Redevelopment Agency. In this case, the department most directly responsible for enforcing the mitigation would likely be the SFPUC. CEQA does not require public input when implementing details of mitigation measures.



Comments requesting an extension of the public comment period for the SEIR to accommodate review of the SFPUC/Crites report are referred to the response in General, "Brown & Caldwell Report."

Comments regarding concerns about the absence of Dr. Middlebrooks from the TRC do not address the accuracy or completeness of the SEIR, and no response is required under CEQA. Those concerns have been directed to the SFPUC for its consideration.

### **Adequacy of Catellus (Lee & Ro) Report**

#### ***Comments***

The draft (p. V.K.28) admits that no independent feasibility analysis has been performed for the various alternative wastewater technologies as applied to the Mission Bay project. The Catellus feasibility assessment is obviously *not* independent, and its negative conclusions about a few very narrowly defined alternatives (p. V.K.28-30) reflect limited knowledge of the capabilities of alternatives. Two examples of overlooked alternatives are: (a) evergreen trees are not dormant in winter, and would continue to provide nutrient and metals removal, and (b) package treatment systems could be cost-effective when combined with other alternatives instead of providing reclaim-quality water. Reliance on the Catellus study again ignores a large number of feasible wastewater alternatives. (*Jeff Marmer, Coalition for Better Wastewater Solutions*) [*letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter*]

Catellus' consultants (Lee & Ro, Inc.) prepared a Technical Report on Alternative Water Quality Control Technologies for the Mission Bay Project, which concluded that the proposed plan (combined sanitary sewage and stormwater North of the Channel, and separate sanitary sewage and stormwater collection South of the Channel) would be equivalent to the alternatives studied of at least 80 percent capture of all project storm water and subsequent treatment at the Southeast Water Pollution Control Plant (WPCP). No study was done on the pollutant loadings of CSO's or stormwater (in excess of what can be captured and treated at the WPCP) into Mission Creek or the Bay. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

Despite the abundance of alternatives, the SEIR makes only the most cursory reference to them, and apparently the only documentation for any evaluation of alternatives whatsoever is the 1+ page letter from Catellus consultants Lee & Ro to Catellus Project Manager David Knadle. Besides containing little data, the opinions in the letter are factually incorrect in key areas. For instance, in discussing decentralized water recycling, the statement is made that "pollutants removed by recycling process would still require treatment at Southeast WPCP." All industries practicing zero-discharge programs would be surprised to learn this. It really depends on the resource recovery methods and the pollutant being referred to and the fate of that pollutant. For instance, nitrogen forms, phosphorous, and many metals may be removed from the waste stream prior to discharge. VOC's and hydrocarbons, even chlorinated compounds, may be subject to oxidation and bioremediation processes at any site. Pathogen removal rates can also be high and thorough. What pollutants are they referring to? . . .

The Lee & Ro letter is much too general, too limited, and too inaccurate a document to be given the weight it is as a reference in the Hydrology and Water Quality analysis of the SEIR. (*Bill Wilson, Environmental Planning & Design*)

Without the technical evaluations, the SEIR's discussion of Source Control Technologies, Treatment Optimization Technologies and Post-Secondary Treatment Technologies are incomplete and simply emphasize Catellus' categorical rejection of each of those options. Vol. II at V.K.28-30. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

These comments criticize the SEIR's apparent reliance on the February 20, 1998, letter report prepared by Lee & Ro, Inc., for Catellus Development Corporation. The comments state that the report was not prepared independently and does not adequately address alternative treatment technologies. The comments make several specific criticisms related to the adequacy of the Catellus report, and they state that the SEIR does not adequately evaluate alternative technologies.

Catellus evaluated various alternative technologies while defining its project proposal. Catellus then proposed a separated sewer system for the Central/Bay Basin that would be connected to the combined sewer system so that initial stormwater flows could be captured and treated. The proposed system would capture about 80% of stormwater runoff from the Central/Bay Basin. Lee & Ro indicated that alternative technologies could provide similar removal levels for suspended solids./29/

On p. J.5 of Appendix J, Hydrology and Water Quality, the SEIR refers to and summarizes the Catellus report. The SEIR clearly attributes the report to Catellus, referring to the analysis as providing Catellus's conclusions. The SEIR does not assume objectivity on the part of the Catellus report, noting under "Alternative Wastewater Treatment Technologies" on p. V.K.28 that "no independent feasibility analysis has been performed." Furthermore, the SEIR does not rely on the report in its analysis of environmental impacts, presented under "Impacts" on pp. V.K.22-V.K.61. The wastewater treatment system proposed by Catellus is thoroughly analyzed in the SEIR for potential environmental impacts. The SEIR concludes that the project's proposed system would not cause any significant impacts to water quality, sediment quality, and beneficial uses of Bay waters. Thus, no alternative wastewater treatment systems or options, such as those rejected by Catellus in planning the project, are required to be studied and analyzed in the SEIR. The SEIR's discussion of options studied and rejected by Catellus is for informational purposes only. To the extent that the SEIR has identified a contribution to significant cumulative impacts, the recommended approach to mitigation is not to prescribe a specific technology, but instead to establish a performance criteria. For this reason, the SEIR does not evaluate specific options not proposed as part of the project, such as evergreen trees, package treatment systems, and water recycling systems. Therefore, responses to specific criticisms regarding the Catellus report are not provided here.

The SEIR does not constrain the possible implementation of alternative technologies in the Project Area. In fact, Mitigation Measure K.4 on p. VI.47, addressing a potential project contribution to a



potential cumulative impact, would require the implementation of alternative technologies or other means to reduce settleable solids and floatable materials in stormwater runoff discharged to China Basin Channel. Since the Draft SEIR was published in April 1998, the San Francisco Public Utilities Commission has undertaken an independent review of potential alternative technologies for the Mission Bay Project Area. For more information, refer to the response regarding “Brown and Caldwell (Crites) Report” on pp. XII.278-XII.289. To update the text of the SEIR to reflect the study undertaken by the Public Utilities Commission, the text beginning with the first full sentence at the top of p. V.K.28 has been revised as follows:

**A brief summary of the draft report’s findings is provided below. ~~No independent feasibility analysis has been performed for the various technologies as applied to the Mission Bay project.~~ The San Francisco Public Utilities Commission has completed ~~City and its technical consultant are currently conducting an~~ independent assessment of these and other alternative technologies, and their applicability to Mission Bay. The report found that alternative stormwater treatment technologies potentially appropriate for Mission Bay include vortex gravity separators, sediment/oil trapping, and enhanced sedimentation, but does not make a specific recommendation for use of a specific technology. In addition, Catellus has prepared a feasibility assessment which is provided in “Catellus’ Feasibility Assessment of Alternative Wastewater Treatment Technologies for the Mission Bay Project,” in Appendix K, Hydrology and Water Quality. Also see Mitigation Measure K.4 in Section VI.K, Mitigation Measures: Hydrology and Water Quality.**

## Mitigation Measures

### Stormwater Treatment

#### *Comments*

The Mission Bay Citizens Advisory Committee supports: . . . A requirement that stormwater discharges to Mission Creek and S.F. Bay from the Mission Bay project area in excess of the amounts captured and treated at the Southeast Water Pollution Control Plant be treated to at least the same level as those sent to and treated at the SWPCP. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

Support a requirement that storm water discharges to Mission Creek and San Francisco Bay from the Mission Bay project area in excess of the amounts captured and treated at the Southeast Plant be treated to at least the same level as those sent to the Southeast Plant. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

Stormwater discharges in Islais, Mission Creek, and the Bay must receive the same treatment, regardless of whether or not it is captured and sent to the Southeast plant. . . . (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

Mitigation Measure K.4 requires that stormwater discharges from the project into China Basin Channel should have water quality levels “equivalent to, or better than, City-treated combined sewer overflows.” This level of water quality is unacceptable, since it represents less-than-primary levels of treatment without disinfection and since CSOs are currently resulting in impaired water quality in San Francisco Bay that is unacceptable to growing numbers of local residents. Mitigation Measure K.4 should be revised to state that discharges from the project to China Basin Channel should have water quality levels that will not exacerbate toxicity levels in the Channel already identified by the RWQCB. (*Kate White, Program Director, Urban Ecology, Inc.*)

Moreover, BayKeeper believes the cited goal of improving proposed new storm water quality to something slightly better than the current CSO discharges is hardly a lofty goal. Indeed, for new storm water flows to approach the quality of existing CSOs would certainly not comply with the maximum extent practicable standard applicable municipal storm water systems throughout the country. Both of these mitigations need to be more carefully thought through and put out for public comment before the SEIR is finalized. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

Further, all stormwater discharges from the Mission Bay Project area, whether captured and sent to the SWPCP or not, should be treated to at least the same level as would be received at SWPCP before they are released to Mission Creek and the Bay. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

### ***Response***

These comments recommend that project-related stormwater discharges be treated to a level equivalent to that provided by the Southeast Water Pollution Control Plant. Some of the comments interpret Mitigation Measure K.4 on p. VI.47 to require that the quality of stormwater discharged from the Project Area be at least equivalent to the quality of existing combined sewer overflow (CSO) discharges, and suggest that this level of mitigation would be inadequate.

Current regulations require municipalities with separated stormwater sewer systems to develop stormwater management programs that reduce the discharge of pollutants to the maximum extent practicable (MEP) (see pp. V.K.19-V.K.21). The regulations encourage reliance on the use of Best Management Practices to meet the MEP stormwater standard, rather than the use of conventional treatment at a treatment plant, which is subject to stricter and more specific standards. In San Francisco where most stormwater is collected and treated within the City’s combined treatment system, discharge of stormwater, whether as combined effluent that has been treated to a primary or secondary level, or as part of CSOs, which is subjected to flow-through treatment, is more strictly regulated than stormwater from other municipalities that is directly discharged without treatment. As discussed on pp.



V.K.56-V.K.57, pollutant loading to the Bay could increase if stormwater were to continue discharging directly to the Bay under interim conditions as phased development occurs in the Project Area. Mitigation Measure K.5 (p. VI.47) would require development and implementation of a stormwater management program with Best Management Practices that would meet the MEP standard.

As described on p. V.K.38, about 15.6 MG/yr of stormwater currently flows untreated to the Bay from the Project Area. With the “Proposed Drainage Plan” (pp. V.K.24-V.K.27), stormwater falling on the North Basin and the Mariposa Basin would flow to the combined sewer system. Most of these flows would be treated at the Southeast Plant. A relatively small portion would be discharged as treated CSOs (refer to the flows summarized in Figure V.K.3 on p. V.K.31), unless Mitigation Measure K.3 is implemented. In the Central/Bay Basin, the “initial flows” of stormwater from each storm (about 80% of the average annual stormwater runoff from the Central/Bay Basin) would be captured and sent to the combined sewer system. The remaining 20% would be discharged directly through outfalls to China Basin Channel and the Bay. Mitigation Measure K.4, if adopted, would require the reduction of settleable solids and floatable materials in this portion of the project-related stormwater discharged to China Basin Channel. Thus, Mitigation Measure K.4 would go beyond the MEP standard for direct stormwater discharges by providing for such flow-through treatment of Project Area stormwater.

In combination with Mitigation Measure K.3, Measure K.4 is intended to address project contributions to cumulative impacts which this SEIR conservatively concludes are potentially significant. Project contributions include projected increases in CSO volumes and stormwater discharges into China Basin Channel. As explained on pp. V.K.50-V.K.54, these increases have not been shown to result in a substantial degradation in the water quality of the Bay or near-shore waters, in a toxic effect on aquatic biota, a substantial change to sediment quality, nor a substantial impact on beneficial uses. The SEIR’s conclusion of significance is conservative, and was reached because the cumulative discharges would flow into waters that may be considered degraded.

Mitigation Measure K.4 is intended to ensure that stormwater discharges from the project do not significantly contribute to impacts on sediment quality in China Basin Channel. The measure provides a standard of treatment effectiveness for stormwater discharges to the Channel that could be met in a variety of ways. CSOs receive flow-through treatment designed to remove settleable solids and floatable materials. Since such treatment would address the potential for impacts on sediment quality, the comparison to CSO treatment is appropriate. In addition, the resulting discharge of stormwater would be cleaner because stormwater generally contains less pollutant load than CSOs to begin with. The resource protection provided by Mitigation Measure K.4 would be complemented by other regulatory or performance criteria through the Stormwater Management Program which would be

required under Mitigation Measure K.5 to ensure that stormwater is treated to the maximum extent practicable.

To clarify how the text of Mitigation Measure K.4 relates to the cumulative impacts conclusion, the text under "Conclusion" on p. V.K.54 has been changed beginning with the second sentence as follows:

**CSOs generate a high degree of public concern, however, and conservative presumptions of significance are warranted when a setting is may be degraded or impaired. For these reasons, and in an effort to provide for continued discussion regarding these concerns and to acknowledge the lack of conclusive evidence refuting a causal relationship between treated combined sewer overflows, stormwater discharges, and sediment quality, this report conservatively finds that the project would contribute to a potentially significant cumulative impact on near-shore waters of San Francisco Bay from treated CSOs, and direct stormwater discharges to China Basin Channel. The project contribution (0.2%) to the potential cumulative increase (11%) in Bayside CSO volumes, and the contribution of the project-related stormwater discharges to possible cumulative impacts, ~~stormwater discharges~~ would be reduced to a level of insignificance with the imposition of Mitigation Measures K.3 and K.4, described in Section VI.K, Mitigation Measures: Hydrology and Water Quality.**

Similar changes have been made to the third paragraph on p. II.29 in Chapter II, Summary:

**Treated combined sewer overflows generate a high degree of public concern, however, and conservative presumptions of significance are warranted when a setting is may be degraded or impaired. For these reasons, and in an effort to provide for continued discussion regarding these concerns and to acknowledge the lack of conclusive evidence refuting a causal relationship between treated combined sewer overflows, stormwater discharges, and sediment quality, this report conservatively finds that the project would contribute to a potentially significant cumulative impact on near-shore waters of San Francisco Bay from treated combined sewer overflows, and direct stormwater discharges to China Basin Channel. The project contribution (0.2%) to the potential cumulative increase (11%) in Bayside combined sewer overflow volumes, and the contribution of the project-related stormwater discharges to possible cumulative impacts ~~stormwater discharges~~ would be reduced to a level of insignificance with the imposition of mitigation measures regarding combined sewer overflow volumes and alternative treatment technologies, as discussed below.**



### Reductions in Combined Sewer Overflow Volumes

#### *Comments*

It makes a great deal of sense to try and reduce or eliminate discharges into near shore receiving waters, which are “not subject to the same diffusive mixing as the deepwater Southeast Plant outfall”, and where “(c)oncentrations of toxic pollutants near and in the tidal zone. . .may be substantially higher than concentrations occurring in the open Bay” (V.K.42). . .

The Mission Bay Citizens Advisory Committee supports: . . .A change in proposed Mitigation Measure K.3: “such that potential flows to the City’s combined sewer system from the project REDUCE (rather than DO NOT CONTRIBUTE TO INCREASED) annual overflow volume. . .”

A requirement that any discharges of combined sewage and stormwater or stormwater, and any alternative treatment plans, be designed to protect and enhance the aquatic environment, and not contribute to degradation of that environment. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

The toxic subcommittee and the CAC therefore recommend that we write a response to the EIR that will support a change in proposed mitigation measure K-3 such that potential flows to the City’s combined sewer system from the project reduce rather than do not contribute to increased annual storm overflow volume. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

No increases of CSO’s should occur and the city should be working to reduce the number of CSO’s at all outfall locations, especially at Islais Creek. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

Overall, the water quality mitigations proposed [are] not as strong as they should be. MCC suggests that proposed Mitigation Measure K.3 be amended to require that potential flows to the City’s combined sewer system from the Project *reduce* annual overflow volumes, rather than simply not contribute to increased annual overflows, as the proposed measure requires. . .

Finally, any proposed discharges of stormwater or combined sewage and stormwater related to the Project and any treatment methods adopted to address these should be expressly designed to protect and enhance the aquatic environment of Mission Creek and the Bay beyond and should not instead contribute to the further degradation of that environment. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

Water Pollutants. Since the results of the CSOs run past our homes, we feel obliged to note that, notwithstanding the statement in V.K.7., “floating solids and discoloration of the water surface” (while improved) are still very noticeable during and after CSOs, and drain discharges containing oil and solvents still often “create an unsightly sheen on receiving waters”, and may have an adverse health effect on swimmers, boaters, fishermen and divers who have contact with Mission Creek on a regular basis. This should be mitigated by improvements in the City’s combined sewer system. The presence of “floatables”, including plastic, condoms, dead rats, etc. may be particularly offensive to new

residents of Mission Bay North. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

Mitigation Measure K.3 requires that the project would “contribute to increased annual overflow volumes as projected in the Bayside Planning Model [emphasis added].” Given the severity of the impacts that will occur from the project, and given the already overloaded conditions of the City’s treatment system during wet weather, Mitigation Measure K.3 should be revised to state that the project should not contribute any stormwater to the Bayside treatment system. This could be accomplished through the installation of a more extensive separated stormwater collection system in all three areas of the project. Such a system should include technologies to reduce stormwater pollutant loading such as vortex-type sediment traps, cartridge leaf filters, and constructed wetlands. (*Kate White, Program Director, Urban Ecology, Inc.*)

The environmental review’s failure to describe with any particularity a plan to mitigate the adverse impacts of the estimated increases in sewage overflows to the east side of the City’s shoreline. . .NEW PROJECTS, ESPECIALLY OF THE MAGNITUDE OF THE PROPOSED MISSION BAY PROJECT, SHOULD BE PLANNED AND DESIGNED SO THAT THEY REDUCE EXISTING SEWAGE OVERFLOWS, NOT INCREASE THEM. . .

Obviously, the City’s goal should be to begin to get a handle on the CSO problem by, perhaps for the first time, designing a development project which itself would reduce the quantity of sewage overflowing rather than increasing it and trying to explain how more sewage into shallow dead end creeks will not adversely affect the aquatic environment or the quality of life for San Francisco’s residents. . .

The environmental review’s failure to describe with any particularity a plan to mitigate the adverse impacts of the estimated increases in cumulative sewage overflows and flows to the Hunters Point sewage plant. The path the proposed Mission Bay project threatens to put the City on would increase the average volume of sewage overflows to Mission and Islais Creeks by 98 million gallons per year! Again, that estimate does not contemplate the heavier rain years, like this past year, which one would expect to perhaps double that estimate. Nor does that number include all of the planned or anticipated growth in the City. Similarly, the increased waste flow to the Hunters Point plant is estimated to total on average an additional 1.3 billion gallons of waste per year! . . .

In order to avoid the application of that [antidegradation] policy, the SEIR must include a specific mitigation plan [to] eliminate any increases, and result in decreases, in overflows. . .

The Mitigation Measures Hinted At Need To Be Specified And Proposed Now. The total sum of mitigation measures described to address the numerous water quality concerns described above are set forth in two paragraphs within the three volumes of the SEIR. Vol. II at VI.47. Although BayKeeper appreciates the goal of employing sewer improvements to prevent the estimated 2 million gallon increase in overflows, we believe that if the specific proposal were set forth in an actual plan, the City would be able to consider not only holding the line on sewage overflows but in fact reducing them in volume. Mitigation K.3. Moreover, a coordinated mitigation proposal would include many more flow reduction opportunities that would help on both the CSO and storm water sides of the equation. . .(*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)



### *Response*

These comments suggest that Mitigation Measure K.3 on p. VI.47 does not go far enough in mitigating the cumulative impact of increased combined sewer overflow (CSO) volumes (discussed under “Cumulative Issues” on pp. V.K.50-V.K.55). Whereas Mitigation Measure K.3 would require that project-related flows to the combined sewer system not result in increases in overflow volumes, these comments recommend that Mitigation Measure K.3 require reductions in existing overflow volumes. Other comments refer to the need for a more defined mitigation plan and suggest that more mitigations could offer opportunities to improve the environment.

Although some comments have disagreed with the SEIR’s conclusion, no substantial evidence has been presented that the project would substantially impact water quality. As discussed further in “Background Regarding Existing Combined Sewer System” on pp. XII.232-XII.238, CSOs are not raw sewage, and current and future CSO discharges under the proposed project would comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit. Comments on the adequacy of the existing combined sewer system should be directed toward the San Francisco Public Utilities Commission and the Regional Water Quality Control Board.

Under “Standards of Significance” on p. V.K.22, the SEIR states the significance standard upon which the conclusions of significance are based. As discussed under “Effects of Treated Combined Sewer Overflows” on pp. V.K.43-V.K.46, the SEIR determines that the water quality impact of the project, by itself, would be less than significant. The proposed project would be considered to have a significant effect if it would substantially degrade water quality. In the case of the project by itself, water quality would not be substantially degraded.

CEQA does not require that projects result in beneficial environmental effects; it only requires the identification of feasible measures for the reduction and avoidance of significant adverse environmental impacts caused by the project. The SEIR determines that the project would not result in a substantial degradation in the water quality of the Bay or near-shore waters, in a toxic effect on aquatic biota, a substantial change to sediment quality, nor a substantial impact on beneficial uses (pp. V.K.50-V.K.54). However, based on the high degree of public concern about CSOs; the lack of conclusive evidence refuting a causal relationship between CSOs, stormwater discharges, and sediment quality; and the recognition that the existing setting may be degraded, the SEIR conservatively finds a potentially significant cumulative impact from CSOs and untreated stormwater discharges. The project would contribute a small fraction of the cumulative increase in annual Bayside CSO volumes. This SEIR recommends measures to mitigate this project’s contribution to the significant impacts. Appropriately, other projects contributing to this cumulative impact would also be responsible for their share of the solution, to the extent feasible. The contributions of other proposals to this cumulative

impact would be evaluated during the environmental review processes for those projects, and mitigation would be identified, as necessary and feasible for those projects. Mitigation Measure K.3 appropriately allocates the project sponsor's responsibility for mitigation, by eliminating the project's contribution to the potentially significant cumulative impact. Various mitigation options are available, as discussed in the response regarding "Illustrative Mitigation Scenarios," pp. XII.253-XII.277. While not necessary to eliminate significant impacts, the analysis and the suggested mitigation measures in the SEIR would not preclude decision-makers from requiring the project to reduce existing CSOs.

One comment incorrectly cites the analysis that Mission Bay would increase the average annual volume of CSO discharges by 98 million gallons per year. An increase of 98 million gallons per year would occur under the Cumulative Bayside condition, not under the proposed project condition, which would increase the average annual volume of CSO discharges by 2 million gallons per year (see Table V.K.3). To correct another comment statement, project and cumulative increases in CSO discharges would occur through outfalls located along the entire Bayside, not just to China Basin Channel and Islais Creek. See also "Rainfall Data Used in Bayside Planning Model" on pp. XII.307-XII.311 for a discussion of the rainfall data used to arrive at those numerical results, and "Environmental Justice" on pp. XII.378-XII.392 regarding increased project-related sanitary flows to the Southeast Water Pollution Control Plant, which would be less than significant as discussed under "Deep Water Effects of Increased Treated Effluent" on p. V.K.41.

#### Mosquito Control for Water Storage Facilities

##### ***Comment***

The Mission Bay Citizens Advisory Committee supports: . . . A requirement that any temporary water storage facilities be treated for vector control particularly to control mosquitos. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

##### ***Response***

This comment inquires as to the need to control vectors, particularly mosquitoes, in project-related water storage facilities. To implement Mitigation Measure K.3 on p. VI.47, water storage facilities could be constructed to decrease the potential for combined sewer overflows without increasing the volume of stormwater discharged directly to the Bay. Water would only be stored in these facilities temporarily until it could either drain or be pumped to the combined sewer system for treatment. The water storage facilities would not provide favorable conditions for mosquitoes because drainage would be rapid after a storm, which would discourage mosquito breeding habitat from forming. Separate from temporary detention basins to implement Mitigation Measure K.3, interim drainage facilities during the phased development of the Project Area also would be designed to ensure rapid drainage



after a storm. See “Sewer Improvements: Central/Bay Basin” and “Interim and Temporary Uses” in Section V.M, Community Services and Utilities, pp. V.M.51-V.M.53, and “Proposed Interim Drainage Plans for Phased Development” and “Proposed Drainage Plans for Interim Giants Ballpark and UCSF Parking” on pp. V.K.55-V.K.56. Therefore, vector control measures would be unnecessary.

#### Alternative Technologies for Stormwater and Combined Sewer Overflows

##### **Comments**

The Mission Bay Citizens Advisory Committee supports: . . . A requirement that alternative wastewater technologies determined to reduce pollutant discharges into Mission Creek and S.F. Bay be incorporated into the project’s design and infrastructure, as determined by the PUC and the Technical Review Committee. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

Support the requirement that alternative wastewater technology reduce pollutant discharges into Mission Creek and San Francisco Bay be incorporated into the project’s design and infrastructure as determined by the study that the PUC is now doing, and support a requirement that any discharges of combined sewer and storm water or storm water alone and any alternative treatment plans be designed to protect and enhance the aquatic environment and not contribute to degradation of that environment. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

##### **Response**

These comments support the use of alternative technologies to reduce pollutant discharges to the near-shore environment and suggest that the project be designed to protect and enhance the environment as opposed to degrading it. Mitigation Measure K.4 on p. VI.47 would require the use of alternative technologies to reduce certain pollutant levels in project-related stormwater discharges to China Basin Channel. This measure is not identified for combined sewer overflows because Mitigation Measure K.3 on p. VI.47 would eliminate the project’s contribution to overflows. Together, Mitigation Measures K.3 and K.4 would reduce project contributions to potential cumulative impacts to the near-shore environment to less-than-significant levels. For more information, refer to the response regarding “Pollutant Loads and Federal and State Antidegradation Policy” on pp. XII.367-XII.370.

#### Additional Mitigation Measures

##### **Comment**

Once the impacts indicated above are properly identified, additional mitigation measures will also be necessary. While we applaud the City and the project proponents for the willingness to include a separate stormwater collection system in a part of the project and for the inclusion of Mitigation

Measures K.3 and K.4, which would lessen stormwater flows from the project, these features and measures do not go far enough. (*Kate White, Program Director, Urban Ecology, Inc.*)

### ***Response***

This comment calls for unspecified additional mitigation measures, stating that the mitigation measures identified in the SEIR do not go far enough. CEQA requires that feasible mitigation measures be identified, to the extent possible, for all significant impacts, and such mitigation measures are to include practical means for reducing or eliminating significant impacts. CEQA does not require that mitigation measures be identified to reduce less-than-significant impacts or provide environmental benefits that would constitute improvements to existing conditions. Each mitigation measure identified in Chapter VI, Mitigation Measures, including Mitigation Measures K.1 through K.6 on pp. VI.45-VI.50, responds to one or more potentially significant adverse environmental impacts of the project, or adverse impacts to which the project would contribute. As explained under “Conclusion” on p. V.K.54, the SEIR is conservative in its findings of potential project contributions to cumulatively significant impacts. Implementing Mitigation Measures K.1 through K.6 would eliminate or reduce the impacts of the project to less-than-significant levels. These measures would also reduce the project’s contribution to cumulative water quality impacts. Because Mitigation Measures K.3 and K.4 include performance criteria related to combined sewer overflow and stormwater discharges, the specific approaches to implementing these measures have not been selected; therefore, various specific mitigation strategies not specifically described in the SEIR could be employed. See also the response in Mitigation Measures regarding “Delay in Specification of Mitigation Measures,” pp. XII.458-XII.460. Regarding possible mitigation options, refer to the response regarding “Illustrative Mitigation Scenarios” on pp. XII.253-XII.277.

## **Bayside Planning Model**

### **Appropriateness of the Bayside Planning Model**

#### ***Comments***

The *Bayside Cumulative Impacts Analysis Draft Report* selectively uses very limited information generated by the *Bayside Planning Model*, resulting in an unnecessarily limited evaluation of impacts. For example:

The model is used only to indicate only “uncalibrated” incremental changes in CSO’s between different alternatives, rather than provide a basis from which to evaluate (a) compliance with the CSO limits in the NPDES permit, and (b) impacts on beneficial uses.

The general statement that “the program is successful because it is supported by the citizens of the City, who want to protect the Bay and ocean.” is not derived from nor reflected by the model. Any



attempt to validate such a statement would require using the model to calculate reductions in the frequency and volume of CSO's for different alternatives (e.g. project designs, segregation of stormwater and wastewater, larger transports and/or sewer storage capacities), followed by a survey of whether citizens support the expected impact of the CSO's.

*(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter])*

The Bayside Cumulative Impacts Analysis Draft Report selectively uses very limited information generated by the Bayside Planning Model, resulting in a limited evaluation of the impacts. For example:

The model is used only to indicate incremental changes in CSO's between different alternatives, rather than provide a basis from which to evaluate (a) compliance with the CSO limits in the NPDES permit, and (b) impacts on beneficial uses.

The general statement that "the program is successful because it is supported by the citizens of the City, who want to protect the Bay and ocean." is not derived from nor reflected by the model. This will not offer the bay any of the protection required by all of the surrounding communities. Any attempt to validate such a statement would require using the model to calculate reductions in the frequency and volume of CSO's for different alternatives (e.g. project designs, segregation of stormwater and wastewater **in separate sewers**, larger transports and/or sewer storage capacities), and alternative destinations for the sewerage followed by a survey of whether citizens support the expected impact of the CSO's. *(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter]; bold in original)*

A great deal of effort is made in the SEIR to present the results of modeling of various "alternatives" in wastewater and stormwater collection and treatment. The Bayside Planning Model used is fatally flawed as a tool for the type of comprehensive, integrated, optimized system design required by the magnitude of the coming Bayside redevelopment. . . Then, three ranges of options are modeled. The comparisons begin only once water has already entered the major collection system and storage-containment structures at the bottom of the gradient, and only runs a hand-full of very limited scenarios.

The essence of watershed modeling is to begin at the top of the gradient and evaluate the entire fabric of options all the way down to the receiving waters. Running a genetic algorithm, a computer-assisted technique that utilizes all of the detailed and specific information that is available to projects of this scope to run millions of comparisons and evolve real optimizations, would be a much better investment of effort. In view of the tools available as we enter the 21st Century, including Geographical Information Systems (GIS) and satellite imaging, reliance on this limited and clumsy model is a poor guide for the contemplated investment of billions of taxpayer dollars. *(Bill Wilson, Environmental Planning & Design)*

### **Response**

As discussed under "Changes in Discharges to Receiving Waters" on p. V.K.30, the SEIR relies on the Bayside Planning Model to estimate the foreseeable effects of the project on wastewater flows managed by the combined sewer system and to estimate any possible increases in combined sewer overflows

(CSO). As presented under “Effects on Receiving Waters” on pp. V.K.40-V.K.50, the SEIR evaluates impacts on beneficial uses on the basis of the model results and additional information. The Bayside Planning Model provides a reasonable means of assessing project-related effects for CEQA purposes. The Bayside Planning Model was developed to assist the City in designing its Wastewater Master Plan facilities and has been accepted by the Regional Water Quality Control Board for that purpose. It is an appropriate tool for studying the possible incremental effects of the project on these facilities. Its use for CEQA purposes is not intended as a design tool for facilities, nor is it intended to serve as a tool in evaluating San Francisco’s compliance with its National Pollutant Discharge Elimination System (NPDES) permits, as discussed under “Combined Sewer System Permits” on pp. V.K.18-V.K.19.

The model accounts for the entire Bayside area, including all areas where flows enter the combined sewer system. Hourly dry-weather flows are combined with stormwater flows estimated on an hour-by-hour basis using actual rain data collected over 70 years. The model evaluates each watershed separately and adds its flows to appropriate storage and pumping facilities, accounting for transport times as necessary. To determine the effects of the project, system conditions not related to the project are held constant or adjusted to reflect a consistent operating strategy at each pump station. While holding basic operating assumptions constant, baseline and project scenarios were evaluated to discern project effects on typical combined sewer system operations and CSOs.

Because the model results used for SEIR purposes relate to flows from the storage facilities at the bottom of each watershed, the level of refinement provided by the model is adequate. There is no need to evaluate millions of comparisons and optimize parameters relating to watersheds that are not part of the Project Area. Furthermore, because the model is adequate for CEQA purposes, there is no need to employ geographic information systems and satellite imagery. These techniques could allow some refinement in flow estimates, but they would be unlikely to contribute meaningfully to the flow estimates derived from the model. The Bayside Planning Model provides adequate information to allow project decision-makers to adequately evaluate the effects of the project when considering project approval.

Regarding the statement about public support for the wastewater control program, the comment refers to a sentence in the *Draft Bayside Cumulative Impact Analysis*, a document that describes the Bayside Planning Model. The document states,

Twenty-five years after the Clean Water Act was enacted, San Francisco is successfully completing a significant and complex wastewater control program. This program is successful because it is supported by the citizens of the City, who want to protect the Bay and ocean.



The Bayside Planning Model is not intended to reflect or validate this statement. The statement is a reflection of its authors' perspective. The SEIR does not rely on this statement to support its analysis or conclusion.

Regarding the use of the Bayside Planning Model as a guide for the investment of taxpayer dollars, project-related wastewater infrastructure would not cost billions of taxpayer dollars. In the event that the comment does not refer to the project, but to the entire wastewater management system, including the wastewater treatment plants, then the comment is misdirected. This SEIR focuses on the impacts of the Mission Bay project; comments regarding existing facilities are beyond the scope of this CEQA process. See the response under "Background Regarding Existing Combined Sewer System," on pp. XII.232-XII.238.

Regarding the calibration of the model, refer to the response regarding "Calibration and Verification of the Bayside Planning Model," on pp. XII.311-XII.312.

#### Assumptions Used in the Bayside Planning Model

##### ***Comments***

There are several unclear points in the *Bayside Planning Model* report:

The footnote in Table A1 points out that pumps were added to the model even where they do not exist in reality, "...to accomplish flow balance. . .".

On page A16, there is a statement that the Flynn pump station "...must make up the difference by pumping more than 110 mgd", even though the actual capacity of the pump station is 110 mgd. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter]*)

Finally, it should be noted that the Bayside Planning Model is not clearly defined anywhere in the Draft EIR. It is introduced on page V.K.30 of the Draft EIR, where the text refers to Appendix J for a description of the model. Appendix J lacks any description of the actual functioning of the model, and it fails to show the inputs to the model in terms of hourly rainfall, watershed areas, runoff coefficients, pumping rates, storage volumes, or assumed wastewater and stormwater generation increases associated with cumulative projects. The EIR needs to disclose these input values so that they can be reviewed by the public.<sup>4</sup> This information needs to be included in a recirculated Draft EIR, since it has been impossible for the public to complete a thorough technical review of the model results without the necessary background information on the functioning of the model. . .

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<sup>4</sup> Beth Goldstein and Michele Pla of the City's Public Utilities Commission supplied a memo, dated March 26, 1998, which purports to explain the working of the Bayside Planning Model. This memo, which is not part of the EIR, does not contain the information that we are requesting in this comment.

The Draft EIR (page V.K.34) states that the calculated increase in combined sewer overflows (CSOs) under base case + project conditions would be 0.2%, and that the base case + cumulative projects increase would be 11%. As noted above, these estimates will increase if appropriate assumptions regarding rainfall, treatment capacity and cumulative projects are included. (*Kate White, Program Director, Urban Ecology, Inc.*)

The model assigns runoff coefficients to various parts of an area that encompasses almost 2/3's of the City of San Francisco based on numbers given by a Metcalf & Eddy model from 1980 that has not been ground-truthed and may have changed considerably in the last two decades. (*Bill Wilson, Environmental Planning & Design*)

### ***Response***

Under "Changes to Discharges to Receiving Waters" on p. V.K.30, the SEIR cites a San Francisco Public Utilities Commission (SFPUC) staff report titled *Draft Bayside Cumulative Impact Analysis* (see endnote 57 on p. V.K.68). The report provides detailed information about the Bayside Planning Model that, for the sake of brevity, is not included in the SEIR. As stated in the note on p. V.K.70, a copy of this report is on file for public review at the Office of Environmental Review (Planning Department, 1660 Mission Street, San Francisco) and was available during the public review period for the Draft SEIR. In this way, the SEIR avoids placing these highly technical details and specialized analyses in the main body of the SEIR text.

Appendix A of the *Draft Bayside Cumulative Impact Analysis* describes the model, its inputs, its outputs, and critical assumptions used in the modeling effort. The report identifies watershed areas, runoff coefficients, pumping rates, storage volumes, and assumptions regarding cumulative development. Because the hourly rainfall data used by the model are contained in an electronic file with roughly 500,000 individual entries, they are not reproduced in the *Draft Bayside Cumulative Impact Analysis*. These data are available in electronic form upon request from the SFPUC. The *Draft Bayside Cumulative Impact Analysis* and summarized information provided in the SEIR provide sufficient information to allow a meaningful review of the reasonableness and adequacy of the SEIR analysis. The technical details provided by the SEIR are sufficient to permit the full assessment of any significant environmental impacts by reviewing agencies and the public.

SFPUC staff believe the March 26, 1998, memorandum to which a comment refers is a cover memorandum for the *Draft Bayside Cumulative Impact Analysis*. That memorandum was not intended to explain how the Bayside Planning Model works; that explanation is in Appendix A of the *Draft Bayside Cumulative Impact Analysis*.

Regarding the representation of pumps by the Bayside Planning Model where pumps do not exist (as noted in a footnote to Table A1 in the *Draft Bayside Cumulative Impact Analysis*), the model calculates



flows on the basis of mass balances. Dry-weather flows and stormwater runoff are estimated for each watershed, and the total of these flows is allocated among the treatment systems and combined sewer overflows. All the water entering the system is assumed to exit the system. In most cases, water moves through the system by means of pumps, each with a maximum operating capacity. The model considers the operations of these pumps and accounts for appropriate water transfers throughout the system. However, in a portion of the actual system near Hunters Point, water moves from one location to another by gravity. Although no actual pump exists in these locations, the model must account for the movement of this water to provide meaningful results. Therefore, the model uses a fictitious pump, whose pumping rate is adjusted to resemble the flows that actually occur by gravity.

Regarding the capacity of the Flynn pump station (as discussed on p. A16 of the *Draft Bayside Cumulative Impact Analysis*), the nominal capacity of the pump station is 110 million gallons per day (mgd). During wet weather, the Flynn pump station, the Southeast lift station, and the Channel pump station deliver wastewater to the Influent Control Structure, which combines these flows before they enter the Southeast Water Pollution Control Plant. The wet-weather capacity of the plant is 250 mgd. The capacity of the Channel pump station is 85 mgd, and the capacity of the Southeast lift station is 55 mgd. Therefore, the remaining 110 mgd flow ( $250 \text{ mgd} - 85 \text{ mgd} - 55 \text{ mgd} = 110 \text{ mgd}$ ) is nominally allocated to the Flynn pump station. However, the Flynn pump station can actually pump at a rate greater than 110 mgd, and at times, it does. This occurs when the Southeast lift station cannot pump at a rate of 55 mgd because water storage levels are too low for the lift station to operate at this rate.

Regarding the use of runoff coefficients from 1980, the Bayside Planning Model assumes that surface area permeability has not changed substantially in the past 20 years because of the built-out, urban, paved nature of the Bay side. Of course, changes in runoff coefficients may have occurred since 1980, and these changes could affect the modeling results for individual watersheds. However, in the context of the entire Bayside area, these changes are believed to be inconsequential. Moreover, because the use of the model for CEQA purposes is intended to focus on the effects of the project, major adjustments need not be made to the assumptions used for watersheds not directly affected by the project. Any systematic errors introduced by using 1980 runoff coefficients for these watersheds in completing the baseline calculations would be roughly the same as those introduced in completing the calculations for baseline-plus-project conditions. When the effects of the project itself are determined by subtracting baseline values from baseline-plus-project values, the systematic errors are mostly eliminated. Some uncertainties associated with the model remain, however, as discussed further in the response regarding “Variability and Uncertainty in the Bayside Planning Model Results” on pp. XII.312-XII.315.

### Levels of Treatment Assumed in the Bayside Planning Model

#### ***Comment***

... [T]he Draft EIR (pages V.K.1-2) appears to assert that total wet-weather treatment capacity at the City's Southeast Water Pollution Control [Plant] is about 250 million gallons per day (mgd), with an additional capacity of 150 mgd provided during wet weather at the North Point Water Pollution Control Plant. There is no clear reference in the EIR, but it appears that all subsequent calculations of treatment capacity and combined sewer overflows (CSOs) are based on these numbers. However, these numbers far overstate actual treatment capacity. As noted on the same pages of the Draft EIR, there is only 150 mgd capacity for secondary treatment at the Southeast Plant. The remaining capacity at the Southeast Plant, and all capacity at the North Point Plant, is for primary treatment only. Effluent that has only received primary treatment results in unacceptable water quality conditions when it is released into San Francisco Bay. Therefore, secondary treatment capacity of 150 mgd should be the basis for all calculations of capacity and CSOs. The EIR should be revised to show how much effluent is currently released into the Bay without secondary treatment, and how much will be released under the project and project + cumulative conditions. (*Kate White, Program Director, Urban Ecology, Inc.*)

#### ***Response***

The treatment capacities of the Southeast Water Pollution Control Plant, the North Point Water Pollution Control Plant, and the rest of the Bayside wastewater management facilities (as summarized under "San Francisco's Combined Sewer System" on pp. V.K.1-V.K.2) are defined by San Francisco's dry- and wet-weather National Pollutant Discharge Elimination System (NPDES) permits. In issuing these permits, the Regional Water Quality Control Board has determined that limited wet-weather discharges of wastewater that have received primary treatment are acceptable and comply with applicable water quality standards.

Table V.K.1 on p. V.K.34 estimates wastewater effluent and combined sewer overflow volumes for existing and future conditions on the basis of the Bayside Planning Model (described under "Changes in Discharges to Receiving Waters" on p. V.K.30). The Bayside Planning Model estimates average annual discharges on the basis of calculated mass balances over a 70-year period, as discussed further in the response regarding "Appropriateness of the Bayside Planning Model" on pp. XII.300-XII.303. Table V.K.1 presents the portions of combined sewer flows that receive primary and secondary treatment, and the portions that receive only primary treatment. These data are provided for existing, project, and cumulative conditions.

### Base Case

#### ***Comment***

The Bayside Base Case used as the starting point for comparison in the City's wastewater modeling effort incorrectly includes the proposed Giants' parking. Vol. II at V.K.30. That parking proposal is



not yet constructed, was not included in the Giants' EIR and, per agreement between BayKeeper and the City, will be the subject of public hearings before the Port Commission some time in the future. Bottom line, this proposed parking facility should not be part of any base case. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

The comment asserts that the Bayside Planning Model should not have included the proposed Giants Ballpark parking areas as part of the Bayside Base Case because the parking areas have not yet been constructed; they were not included in the Giants Ballpark EIR; and they are the subject of future Port Commission hearings.

While construction of the Giants Ballpark parking areas has not yet started, construction of the ballpark itself is currently underway, and the ballpark and its associated parking areas are scheduled for completion before opening day in April 2000. The parking areas are part of the overall ballpark project. The parking areas have been approved by the Zoning Administrator. Because this project is approved and under construction, it is reasonable to assume the parking areas as part of the Base Case, regardless of whether the parking areas may be the subject of future Port Commission hearings. Removing the parking from the Base Case would tend to inappropriately understate the effects of the Mission Bay project by, in effect, giving the project credit for removing direct stormwater flows to the Bay that will be removed by the ballpark project.

Regarding the comment that the parking areas were not included in the Giants Ballpark EIR, the parking areas in Mission Bay South were in fact proposed as part of the San Francisco Giants Ballpark project, and their environmental impacts were analyzed in the EIR for that project./30/

### **Rainfall Data Used in the Bayside Planning Model**

### ***Comments***

We are also very concerned that the Bayside Model - as is underestimating the real volumes and impacts. We'd like to know what happened this year, what were the estimated volumes, pollutant loads, marine impacts? What about 1995 which was a 34 [in.] year. Are you using real everyday numbers with storms coming in with actual durations and intensities? That's the reality. Was the 14 year subset that you ran used as an average or each specific year. If each specific year, we'd like to see the picture of what occurred in those two El Nino years? In short we want a better estimation of real volumes of sewage and stormwater numbers because that's what will really determine effects, and from there the "levels of significance, and from there the mitigations. . .

With the Bayside Model and the proposed plan, it seems that there could be a much larger volume of water to the southeast treatment Plant, and or CSO's if storms [came] steady within your projected 1

inch, but kept on coming. Again, could you examine that issue, especially with real rain data. (Jeff Marmer, Coalition for Better Wastewater Solutions)

The *Bayside Planning Model* uses data only from 1907 to 1976. The only justification for not using data from 1977 to 1997, is that it was not entered in the computer's hard drive; this is unacceptable. I would also question the availability and quality of hourly data from the early years. (Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter])

The Bayside Planning Model uses data only from 1907 to 1976. . . (Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter])

The Draft EIR's stormwater and wastewater treatment analysis is based on a series of flawed flow capacity calculations. . . . [T]he entire EIR analysis is based on average rainfall calculations for San Francisco of just 21 inches per year. The use of this average is flawed for two reasons. First, the use of an average by definition means that the average will be [exceeded] roughly half the time. It is unacceptable to plan sewage capacity based on averages; planning should be done based on expected peaks, just as it is for traffic and other environmental factors. Second, rainfall data for the past few years suggest that the "average" rainfall figure is actually low. There was a record-breaking 47 inches of rain in the 1997-1998 season, and 34 inches of rain four years ago. There is a growing body of scientific research that suggests that "average rainfall" calculations like that of 21 inches for San Francisco are actually very low, and that calculated averages should be adjusted upwards. For both these reasons, the rainfall inputs in all stormwater calculations should be adjusted upwards as well. This should be done in the Draft EIR, which should recalculate all stormwater flows and treatment capacities. We would suggest the use of annual rainfall figures of at least 30 inches. (Kate White, Program Director, Urban Ecology, Inc.)

The changes in effluent, overflows and storm water volumes shown at Table V.K.1 is limited to average rainfall years (21" of rain per year). Vol. II at V.K.34. Hence, it fails to provide meaningful numbers for high rainfall years that are guaranteed to occur. . . . Keeping in mind that these estimates are only averages, one can surmise that the actual numbers in normal high rain years could be double or more those provided in Table V.K.1. (Michael R. Lozeau, Executive Director, San Francisco BayKeeper)

Another comment is that we built bridges to withstand strong earthquakes. But the wastewater treatment plants in this environmental report look at the standard average day. Already this year we are at twice that amount. We need to be planning for worst case scenarios and other scenarios. (Kim Rogers)

This whole thing is predicated on a Bay model that has 21 inches of rain. We are at 40, 45, probably, today, twice as much. So if the impact is based on 21 inches, what is it going to look like twice the amount? A four-year average is 30 inches, so that's 50% more. (Jeff Marmer, Coalition for Better Wastewater Solutions)

Our wastewater system is -- it's a cumulative impact, so this is probably by the Public Utilities Commission and it's based on the impact report are based on 21 inches of rain we have had. Over the



past five years we have had over 30% more than that, we have had about 28 inches of rain. This year we've had -- who knows? God knows what we had today, over twice the amount. As somebody said earlier, we build on earthquakes to withstand the worst possible scenario. Why don't we do that? We need to cover these things. (*Alex Lantsberg*)

### ***Response***

These comments object to the use of average rainfall data as inputs for the Bayside Planning Model, asserting that this understates the potential impacts of the project. The comments express concerns that the Bayside Planning Model may not rely on real storm data that reflects actual rainfall durations and intensities. Because of the recent record rainfalls in San Francisco attributed to El Niño, various comments suggest that the SEIR examine conditions during exceptionally wet years. Comments object to basing the analysis on an average annual rainfall of 21 inches, asserting that the average rainfall is now greater than 21 inches per year and suggesting that a value of 30 inches per year be used. The comments reject the notion of designing stormwater management systems for average conditions, suggesting instead that the analysis consider peak or worst-case conditions. Many comments question the use of rainfall data limited to years prior to 1977, when data since 1977 are available, particularly since the quality of the hourly rainfall data from the earlier part of this century could be less reliable than the more recent data. Regarding the use of a 14-year data set to estimate the stormwater volume likely to be captured with the initial flows (as proposed with the project), one comment asks if these values were used as an average or for each specific year. Another comment asks if the Southeast Water Pollution Control Plant could be shown to receive more wastewater if the analysis were to not assume that initial flows would capture the first one inch of each storm.

Different rain data and assumptions are used for different purposes to support the SEIR analysis. The Bayside Planning Model, which was used to estimate volumes of wastewater and stormwater managed by the combined sewer system, relies on actual rainfall data collected by the National Weather Service on an hourly basis for the 70 years from the winter of 1907/08 through the winter of 1976/77.

Therefore, the Bayside Planning Model input data consist of real, hourly rainfall data, not averages, including actual durations and intensities observed in San Francisco. Only the model outputs are annual average values. Project Area stormwater runoff calculations completed for the SEIR do not require hourly data; only the average annual stormwater runoff from the Project Area was needed to estimate average annual stormwater pollutant loads. Therefore, the Project Area stormwater estimate assumes an average annual rainfall of 21 inches. To best estimate the likely performance of the initial-flow capture equipment proposed as part of the project, the San Francisco Public Utilities Commission used rainfall data for the 14 years from the winter of 1972/73 through the winter of 1985/86. These data were available in five-minute increments, which were necessary to evaluate local conditions with sufficient refinement.

Although several comments question the decision not to include in the Bayside Planning Model rainfall data from the winters of 1977/78 through the winter of 1996/97, the 70 years of data used by the model adequately represent foreseeable weather conditions in San Francisco. The data were obtained from the National Weather Service, the most reliable and authoritative source for such information. Using data representing 90 years instead of 70 years would not result in appreciably different results. Moreover, the additional 20 years of data were not included so that the model results obtained for the project are consistent in methodology and assumptions with the model results obtained over the years for the Wastewater Master Plan facilities. The Regional Water Quality Control Board (RWQCB) has accepted the methodology and assumptions for the model, as used for the SEIR. Including the more recent data would not substantially affect the modeling results. Like the older data, the recent data includes extremes of dry and wet years. The average annual rainfall observed for the period from 1907/08 through 1976/77 was 20.06 inches, whereas the average annual rainfall observed for the period from 1907/08 through 1996/97 was 21.05 inches./31/ The difference of 5% is too small to suggest a long-term change in meteorological conditions in San Francisco.

The rainfall value of 21 inches per year was conservatively used in estimating stormwater runoff for the Project Area for purposes of the SEIR. There is no basis for studying an arbitrarily chosen rainfall assumption such as 30 inches per year. The SEIR evaluates typical conditions with and without the project on the basis of a consistent set of data and assumptions. Reporting results in terms of long-term averages does not understate the environmental impacts of the project. In any given year, actual project-related flows would be greater or less than the values presented in Table V.K.1 on p. V.K.34, particularly during drought years and the exceptionally wet weather observed during El Niño events. Nevertheless, the information presented in the SEIR is representative of expected future conditions, and CEQA does not require the analysis of worst case conditions.

As for designing combined dry-weather and wet-weather wastewater management systems for peak conditions versus average conditions, few, if any combined systems have been designed for worst-case conditions because of the enormous storage, pumping, and treatment capacity needed to accommodate a maximum rainfall event. Combined sewer systems such as San Francisco's are engineered to allow limited overflows to occur. This is an inherent feature of such systems. A combined system designed to fully accommodate peak flows without overflow releases would require storage facilities with a much larger capacity than is already provided by the Bayside combined sewer system. The costs of constructing additional large-capacity combined sewers would far outweigh the benefits. Thus, accommodating all flows from above-average storms and rain years, such as El Niño years, would be physically and financially infeasible.



Further, the SEIR is not a design document. Its purpose is to evaluate the effects of the project as proposed. The design of the Wastewater Master Plan facilities was approved by the RWQCB and the U.S. Environmental Protection Agency as a cost-effective system to appropriately control the volume and quality of overflows while meeting applicable water quality standards and safeguarding beneficial uses. The system, as completed and operated, continues to meet water quality standards and to protect beneficial uses/32/,/33/. Furthermore, the system is designed to accommodate wastewater increases from future development in the City, and would therefore continue to meet water quality standards and protect beneficial uses with the project, as verified by the SEIR analysis.

As for the use of the 14-year data set to estimate the stormwater volumes to be captured with the initial flows, the analysis used the rainfall data collected in five-minute increments to understand how this particular portion of the sewer system could perform, as explained in Appendix J, pp. J.4 and J.5. It used this detailed data, rather than the average annual rainfall for the entire 14 years from the winter of 1972/73 through the winter of 1985/86, or data from individual years. As for the potential for the Southeast Water Pollution Control Plant to receive more water if rainwater were to fall so slowly that more than the first inch of runoff could be captured (or if rainfall after the capture of the first inch would be slow enough to allow additional capture), the analysis is based on data for the 14 years described above. There is no reason to believe that the data are not representative of typical rainfall conditions to be anticipated. Average annual rainfall during the 14-year period (24 inches) happened to be greater than the average annual rainfall observed over the 90-year period for which data are available (21 inches). Exceptionally long, slow rainfalls are represented within the 14-year data set, as are short, intense ones, and their associated impacts are considered in the SEIR.

#### Calibration and Verification of the Bayside Planning Model

##### ***Comment***

The *Bayside Planning Model* claims that there was no way to calibrate or verify the results because the Southeast facilities were completed only in March 1997. Partial verification and calibration could have been done using (a) the previous model, which is the basis for this new model, and (b) modifications of the new model to reflect the wastewater system as it existed in different periods. The comparison with the Westside system would be far more valuable and relevant if more details were provided (e.g. more than 5 storms, probability distributions for CSO's vs. storms). (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter]*)

##### ***Response***

As previously stated, the Bayside Planning Model cannot be calibrated to ensure that it accurately reflects existing conditions. This is, in part, because the Wastewater Master Plan facilities were only

completed in 1997. The period for which operating data have been obtained (since completing the Wastewater Master Plan facilities) reflects too short a time to be representative of typical operations. In addition, the available data regarding storage, pumping, and the volumes of treated effluent and combined sewer overflows are insufficient to reliably support a calibration. For example, the San Francisco Public Utilities Commission has no quantitative measurement of combined sewer overflow (CSO) volumes. Only the number and duration of CSOs are known. Furthermore, quantitative estimates of flows from the Southeast Water Pollution Control Plant are imprecise. In the period from 1991 to 1995, the discrepancy between the measured volume of water flowing into the plant versus the measured volume of water flowing out of the plant has ranged from 9% to 18%./34/ With uncertainties of this magnitude regarding the actual operations of the Bayside facilities, a meaningful calibration of the City's wastewater planning models is not feasible for the purposes of this SEIR. This would also be true if the calibration method proposed by the comment were attempted.

The comparison between the planning model used with the Westside system (which is similar in principle to the Bayside Planning Model) and a limited data set representing actual measurements from a series of five storms was included in the *Draft Bayside Cumulative Impact Analysis* for informational purposes. It was not intended to demonstrate that the Bayside Planning Model accurately represents actual Bayside conditions. It does suggest, however, that models similar to the Bayside Planning Model may be useful tools in representing possible future wastewater management operations. See the response under "Assumptions Used in the Bayside Planning Model" on pp. XII.303-XII.305 regarding the model's comparison of baseline and future conditions and the relevance of this comparison to a determination of project impacts even if some model assumptions are imprecise.

#### Variability and Uncertainty in the Bayside Planning Model Results

##### *Comments*

The most severe problem with the *Bayside Planning Model* is that it although it calculates 70 years of hourly data, no attempt was made to provide a probability distribution of CSO frequencies and volumes. An average value is meaningless in attempting to evaluate impacts, setting permit limits, or designing adequate wastewater and stormwater management system. For example, a rationally based limit might be a 99% probability of containment for 99% of storms. The model could easily be modified to present results as probability distributions, and project impacts should be analyzed accordingly. . .

The evaluation of changes in discharges to receiving waters relies on the *Bayside Planning Model* (p. V.K.30), with all the limitations noted separately in the previous section of this memo. The most important inadequacy is in this evaluation of CSO impacts. For example, long-term average annual CSO volumes are probably inaccurate and certainly do not account for variability (easily done by the model). Variability will show much higher loads in some years with the potential for significant



impacts (especially from copper and zinc loads). (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter]*)

The most severe problem with the Bayside Planning Model is that. . . although it calculates 70 years of hourly data, no attempt was made to provide a probability distribution of CSO frequencies and volumes. An average value is meaningless in attempting to evaluate impacts, setting permit limits, or designing adequate wastewater and stormwater management system. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter]*)

The SEIR fails to estimate the increases in volume of sewage expected during above average rain years. . .

The estimated average increase is estimated to be 2 million additional gallons of essentially untreated sewage combined with rainwater to Mission and Islais Creeks. That estimate does not reflect the wetter rain years, such as this past season. Indeed, as an average, it is guaranteed that greater than an additional 2 million gallons of sewage will be discharged in more than half of the years. . .

The estimate that the proposed "initial flow" storm water system would capture about 80% is limited to average rainfall years. Vol II at V.K.27. Assuming the estimate is accurate, obviously this means that the proposal would only achieve that estimated efficiency or better about half of the time. In any above-average rainfall year, the proposed system would capture much less. . .

Like the other projections described above, the cumulative analysis employs average rainfall data to run the planning model. As a result, the numbers underestimate normal high rainfall years and the percent increases will undoubtedly be greater than projected. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### **Response**

These comments criticize the SEIR for not adequately describing the potential variability of estimated combined sewer overflows (CSOs) from year to year, stating that the analysis should estimate the probability distributions of the overflow frequencies and volumes determined by the Bayside Planning Model. The comments assert that the average values reported in the SEIR should not be used to assess environmental impacts, to determine permit limits, or to design wastewater management systems, specifically because, during particularly wet years, copper, zinc, and other pollutant loads could be much higher than projected. One comment suggests a design target might be to contain 99% of the runoff from 99% of all storms. The comments also state that the long-term averages reported in the SEIR are probably inaccurate. Regarding this last point, refer to the response regarding "Rainfall Data Used in the Bayside Planning Model" on pp. XII.307-XII.311.

The number, duration, and volumes of CSOs vary from year to year, depending primarily on the number, volume, and intensity of individual storms. For this reason, the flows described in Table

V.K.1 on p. V.K.34 are estimated averages, and in any particular year, actual flows would be expected to be greater or less than these values, depending on actual meteorological conditions. The Bayside Planning Model algorithm calculates volumes for an entire 70-year period and then divides the total by 70 to obtain average annual values; therefore, other statistical parameters, such as standard deviation, are not readily available.

Table V.K.1 describes representative wastewater effluent, CSO, and stormwater flows with and without the project. The use of annual averages as the basis of the SEIR analysis is consistent with the Regional Water Quality Control Board's approach to determining water quality effects of a CSO discharge system. The analysis accounts for the fact that, due to the nature of an average when applied to numbers that are highly variable, such as annual rainfall and associated wastewater flows, in almost all years, the actual results will be higher or lower than the average. Thus, a year with much greater than normal frequency and/or intensity of storms will produce considerably greater wastewater flows than the average year. A drought year will produce considerably less flow. This does not change or invalidate the SEIR's analysis or conclusions regarding project impacts.

The data reported in the SEIR are intended to support the CEQA analysis. They are not intended for use in determining permit limits. Wet-weather flows managed by the Bayside facilities are, and with the project would continue to be, covered by San Francisco's existing wet-weather National Pollutant Discharge Elimination System (NPDES) permit, as discussed under "San Francisco NPDES Permits and Other Regulations" on pp. V.K.17-V.K.19. As used in the SEIR, the model results are not intended to suggest design changes to existing wastewater facilities; they are used to evaluate the environmental impacts of the project and the proposed changes to Project Area wastewater facilities.

Over time, pollutant loads would vary from those estimated in Tables V.K.2, V.K.3, and V.K.4 on pp. V.K.35, V.K.37, and V.K.39. In part, this variability would result from changes in weather conditions. As discussed under "Volume and Quality of Municipal Wastewater Effluent" and "Volume and Quality of Treated Combined Sewer Overflows" on pp. V.K.33-V.K.36, average pollutant loads would be assumed to be roughly proportional to average wastewater flows. However, pollutant loads would not necessarily be proportional to flows at particular times (i.e., when not considering average conditions). For example, pollutant loads from domestic sewage would not be expected to vary much from day to day, depending primarily on the size of the population served, not the volume of water being discharged to the combined sewer system. During rainy weather, increased CSOs would dilute the fairly constant pollutant loads to result in lower pollutant concentrations. During dry weather, when substantial water conservation efforts are in place, the decreased combined sewer flows would concentrate the pollutant loads to result in higher pollutant concentrations. In either case, the pollutant loads would remain roughly the same. In the same way, stormwater pollutant loads are not necessarily



proportional to flows. Because pollutants are deposited on the ground through many mechanisms in addition to falling rain, the rate at which some pollutants become available to contaminate stormwater runoff (regardless of its volume) can be fairly constant. The stormwater loads provided in Table V.K.4 were estimated by assuming that pollutant loads are proportional to surface areas of different types of land uses. As volumes of stormwater change, pollutant concentrations may change as well, resulting in relatively constant loads, at least when averaged over an entire year. In this way, the presentation of annual averages accounts for the variability (highs and lows) in annual flows. Many more assumptions would be needed to develop a more reliable analytical approach that also provides more detail regarding variations in stormwater flows, and such detail is not needed to evaluate the project's impacts.

There is no basis for adopting an arbitrary design standard such as 99% stormwater runoff containment of 99% of storms, and the project design has not done so. This measure would require a substantial investment of developable space to accommodate costly storage (and/or treatment) facilities sufficient to achieve the standard. The SEIR does not identify a significant environmental impact that would warrant this volume of storage nor was any substantial evidence of such an impact received during the SEIR's public review period.

Regarding rainfall assumptions used to evaluate the "initial flows" stormwater capture system, refer to the response regarding "Rainfall Data Used in the Bayside Planning Model," on pp. XII.307-XII.311.

### Cumulative Assumptions

#### *Comments*

An EIR must discuss significant "cumulative impacts." CEQA Guidelines section 15130 (a). "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." CEQA Guidelines section 15355(a). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects." CEQA Guidelines section 15355(a). A legally adequate "cumulative impacts analysis" views a particular project over time and in conjunction with other related past, present, and reasonably foreseeable probable future projects whose impacts might compound or interrelate with those of the project at hand. "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." CEQA Guidelines section 15355(b). The cumulative impacts concept recognizes that "[t]he full environmental impact of a proposed . . . action cannot be gauged in a vacuum." Whitman v. Board of Supervisors, 88 Cal.App.3d 397, 408 (1979).

The DEIR fails to adequately consider the cumulative impacts of the proposed project on beneficial use. To be adequate, the discussion must include a reasonable analysis of all of the relevant projects'

cumulative impacts, with an examination of reasonable options for mitigating or avoiding such effects. (CEQA Guidelines section 15130(b)); Environmental Protection Information Center v. Johnson, 170 Cal.App.3d 604 (1985). . .

The DEIR needs to look at cumulative issues (e.g. average overflow frequency to include volume and duration) to truly evaluate the environmental impacts. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

Now, a spate of new development projects planned along the Bay will increase the load on the sewage treatment system. Currently in dry weather 80% of the city's sewage is treated in Bayview and 20% at the Oceanside plant. That ratio just gets "more so" in wet weather, when millions of gallons of rainwater pouring into the sewers is partly alleviated on the east side by activating the old North Point sewage treatment plant.

But anticipated new development—from Treasure Island and China Basin, to Mission Bay, Hunters Point, and Candlestick/3Com Park—also presents "a major opportunity for wastewater treatment and planning," according to a resolution adopted by San Francisco's Commission on the Environment Feb. 10. (*Diana Scott*)

We do not feel that the SEIS/SEIR accurately quantifies the future foreseeable wastewater stream into the Southeast Water Pollution Control Plant. According to CEQA guidelines section 15130(a) the EIR must discuss all significant "cumulative impacts." Cumulative impacts are changes in the environment for the incremental impact of the project when added to other closely related, past, present, and reasonable foreseeable future projects. Future projects need not be certain to occur to be considered in the cumulative impact analysis, "Los Angeles Unified School District v. Los Angeles, (1997) 58 Cal. App. 4<sup>th</sup> 1019, 1024. Further lends meaning to cumulative impacts by stating, "Cumulatively considerable" under the statute means, "the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects." Cumulative impacts may result from projects that may be individually minor but collectively significant over a period of time. Id. At.1025.

Most notably absent in the cumulative impact analysis is the large scale development currently proposed by the San Francisco Planning and Urban Research Association (Attachment A). This project calls for twice the amount of homes as the Mission Bay Project, plus commercial and light industrial development. Although there have been no concrete plans for this project, the fact that the Mayor has come out in support of it and it is an extremely well developed proposal indicates that it is reasonably foreseeable. Its absence in the PUC's Cumulative Impact Analysis for the Southeast Water Pollution Control Plant (SWPCP) renders the conclusions regarding additional flows to the SWPCP and the resulting combined sewer overflows (CSO's) from the Mission Bay Project legally inaccurate and irrelevant for the purposes of the SEIS/SEIR.

In addition to the exclusion of a significant development project with twice the projected amount of residential units as Mission Bay, the PUC's cumulative impact analysis also fails to quantify the wastewater impacts, including resulting CSO's, of the nearly 2000 live/work units (Attachment B) currently in the Planning Department pipeline. San Francisco's building boom, for both residential and commercial/high-rise construction is completely [sic] This omission also renders the Cumulative



Impact Analysis and the SEIS/SEIR legally incomplete and inaccurate. (*Alex Lantsberg, Project Coordinator, Southeast Alliance for Environmental Justice*)

Our concern is that on the Bay side now, Mission Bay, and the series of other cumulative major projects over there, are actually going to be loading the system to the maximum it can before they start overflows and then dumping a lot more storm water into the Bay. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

We especially want a reconsideration of the cumulative development. We'd like to see the expanded list of projects, and perhaps a grid/range for various percentages of buildout. For example the Central Waterfront project severely throws the cumulative model out of wack. Both for development and dry weather sewage generation and stormwater - more intense development. While this plan may not be adopted in full - as today's letter to the editor in the Chronicle implies, could we see projections at 50% and 1/3. Even fifty percent development means a project equal to Mission Bay. Given the seriousness of this effort, clearly the estimation of "negligible" for port generation of sewage is way off track. (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

Second, the cumulative impact analysis in the stormwater and water quality section of the Draft EIR (Section K) is also inadequate. This section of the EIR utilizes the City's Bayside Planning Model to model cumulative wastewater/stormwater treatment impacts. This model's cumulative scenario claims to include the "major" reasonably foreseeable projects in the City that could affect Bayside operations. In fact, however, the model only includes four projects over and above the existing "baseline;" these four projects are Mission Bay, Candlestick Park, Hunters Point and some waterfront development.

The Bayside Planning Model is inadequate as a basis for prediction of cumulative stormwater generation and treatment impacts because it does not comply with CEQA requirements for cumulative project analysis. CEQA Guidelines 15130 (c) state that the cumulative discussion must include either (a) a list of past, present, and reasonably foreseeable anticipated future projects, including those outside the agency's control, that have produced, or are likely to produce, related or cumulative impacts, or (b) a summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or area-wide conditions, provided that such documents are referenced and made available for public inspection at a specified location. The Bayside Planning Model's four projects do not meet either of these requirements, since they are only a subset of reasonably foreseeable projects and since they are not based on the City's General Plan.

In conversations with City staff since the publication of the Draft EIR, staff has indicated that the reason that the Bayside Planning Model does not include any cumulative projects other than the four listed above is that there are no other foreseeable projects in the City with the potential to convert undeveloped land (which currently drains to the Bay and/or allows runoff to infiltrate into the soil) to developed land (which would send stormwater to the collection and treatment system). Staff apparently reasons that stormwater, as opposed to wastewater, creates the major impacts on the City's treatment system, so an analysis of future cumulative wastewater impacts is not necessary.

This line of reasoning is flawed for three reasons. First, it is conclusory. There is no way of knowing what the impacts from sewage flows from cumulative development will be unless that cumulative development is modeled. Second, it is incorrect to assume that stormwater is a more significant contributor to total flows than wastewater. Although the Mission Bay EIR contains no clear data on the

split between stormwater and wastewater in the City's total flows, the data that is contained in the EIR suggest that wastewater flows are actually about 80% of total flows.<sup>1</sup> Therefore, wastewater flows from all urban uses are just as important as the stormwater flows from newly urbanized land. Third, increases in sewage as a part of the overall treatment stream will increase the concentrations of pollutants in effluent, and hence in CSOs.

For these reasons, the Bayside Planning Model's cumulative analysis must be expanded if it is to be legally adequate. It must include a full accounting of both stormwater and wastewater flows from all reasonably foreseeable projects in the City's Bayside Area.

In a phone conversation regarding the EIR, City staff acknowledged that other sections of the EIR have more extensive analyses of cumulative projects, which are purposely broad to account for future levels of development that might occur over the 20-year build-out horizon for the Mission Bay project. This same time horizon and project selection criterion should be applied to the cumulative stormwater and wastewater analysis.

For example, the Draft EIR already includes much more extensive lists of probable cumulative development in its other impact assessment sections. The Transportation Section (Section E, page V.E.38), for example, includes ABAG projections of San Francisco growth that include a 4.7% increase in population and a 19.5% increase in employment over current levels. Page V.E.38 goes on to state that these ABAG estimates probably *underestimate* growth, since they do not include [projects] such as the Mid-Market Redevelopment Plan, the Presidio Reuse Plan, or the Transbay Redevelopment Plan. The Transbay Redevelopment Plan alone could add up to 6.4 million square feet of office space, 200,000 of retail space and 8,000 new housing units.<sup>2</sup> At the very least, the cumulative scenario in the Bayside Planning Model should include the ABAG-projected growth rates and these additional projects.

Other foreseeable projects should also be included. These include the following:

- The Yerba Buena Gardens Children's Center.
- The Mexican Museum.
- The Jewish Museum.
- The 200,000-square foot retail/cinema complex at Yerba Buena Gardens.
- The planned . . . luxury hotel-apartment-club next to the Marriot on Market Street.
- The 400-plus room hotel now under construction next to the Museum of Modern Art.
- The 350,000-square foot office tower on Second Street south of Market.
- The proposed mixed-use building at Third and Mission Streets.

Additionally, the Bayside Planning Model needs to include development assumptions for the Central Waterfront Area. As reported by the San Francisco *Chronicle* on May 26, 1998, the San Francisco Planning and Urban Research Association (SPUR) recently promulgated a plan for 12,000 units in this area.<sup>3</sup> The cumulative project analysis for wastewater and stormwater must be revised to include all these projects.

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<sup>1</sup>The Draft EIR (page V.M.44) states that average dry weather flows to the Southeast Pollution Control Plant are 67 mgd, or 24,455 million gallons per year. The Draft EIR (page V.K.34) also states that total Bayside Base Case flows are 30,203 million gallons per year. This means that dry weather flows, which are essentially 100% wastewater, constitute 80% of total flows.



<sup>2</sup>*Transbay 20/20 Concept Plan*, San Francisco Redevelopment Agency, December 1996.

<sup>3</sup>A copy of a memo from Paul Deutsch to Beth Goldstein regarding City staff's previous projections of development potential along the waterfront is attached. This memo shows the staff has clearly underestimated the potential for waterfront development.

*(Kate White, Program Director, Urban Ecology, Inc.)*

The cumulative analysis of waste and storm water flows does not include all reasonably foreseeable projects which would contribute flows to the system. Vol. II at V.K.33. Left off the list are already approved highrises not yet built, individual residential development on the east side of the City (as BayKeeper understands it, perhaps totaling close to 2000 new homes expected during the life of the Mission Bay project implementation), a proposed new Waterfront District south and west of the Mission Bay Project being evaluated by the Planning Department and, more generally, population growth projections. The cumulative analysis should be redone including all reasonably foreseeable projects. . .

The environmental review's analysis of cumulative impacts of sewage overflows, storm water flows and increased flows to the Hunters Point plant fails to take into account all reasonably foreseeable development either planned or contemplated for the City, including already approved highrise projects, expected increases in housing stock in San Francisco and other communities served by San Francisco's sewage system (such as Brisbane) over the life of the Mission Bay project, and a proposed new Waterfront District south and west of the Mission Bay Project being evaluated by the Planning Department. . .LET'S BEGIN WITH THE MISSION BAY PROJECT TO PUT THE CITY ON A SUSTAINABLE COURSE IN MANAGING ITS WASTEWATER STREAMS. *(Michael R. Lozeau, Executive Director, San Francisco BayKeeper)*

And more, it has inadequate review of many small development projects. And we think that you need to look at how to do the residential and some of the other smaller developments impact increase wastewater going through the system, and how that is going to impact the people of Bayview/Hunters Point who already have a disproportionate amount of the wastewater of the City coming through their community. *(Kim Rogers)*

### ***Response***

This group of comments asserts that the SEIR analysis of water quality effects did not account for all anticipated future development and thus did not adequately consider cumulative impacts. Comments cite examples of anticipated new development, ranging from very specific individual buildings to pending areawide plans such as Treasure Island and Hunters Point to a "large scale development" proposed by San Francisco Planning and Urban Research Association (SPUR).

The SEIR analysis was prepared after a thorough review to identify all reasonably foreseeable cumulative projects that could have an effect on each type of environmental impact, including all foreseeable projects and system changes that could affect the wastewater system. Cumulative development included not only the four projects described in detail in the Bayside Cumulative Impacts

Analysis, but also all development forecast by ABAG and all development that could make a difference in hydrologic impact, as described below.

For projections of future wastewater system flows, there are two critical information needs: the amount of sanitary sewage (“dry weather”) flows and the amount of stormwater flows. Sanitary sewage flows are directly related to water consumption. Most water consumed within the City eventually ends up discharged as wastewater to the system. Estimates of City water consumption and concomitant sanitary sewage flows are based on demand from residential and nonresidential users. Therefore, future population and job projections are important in determining future sanitary sewer flows. With regard to flows from the City of Brisbane, San Francisco is under contract to accept a certain amount of dry-weather sanitary wastewater from Brisbane for treatment. Any increase to this amount that might be caused by growth in Brisbane would necessitate contract renegotiation.

Equally important is forecasting changes in per capita water use due to conservation programs. San Francisco has experienced declining per capita residential and nonresidential water use since the mid-1970's. Current water consumption in the City is about 82 million gallons per day (mgd)/35/, down from about 98 mgd in 1970./36/ Thus, between 1970 and the mid-1990's water consumption (and sanitary wastewater flow) declined by about 16% despite a population increase of about 6% (44,000 persons) and an increase in employees of about 8% (40,000 persons). A surplus in the wastewater treatment capacity for dry-weather conditions currently exists. Long-term conservation measures (such as retrofitting of older toilets with newer 1.6-gallon flush models) are projected to continue the trend of limiting increases in water consumption despite population and employment increases, which are projected using the most recent ABAG Projections.

The City has estimated that future water consumption in San Francisco will increase very slightly by 2015. The resulting dry-weather sewage flows are calculated using a constant factor expressed as a percentage of water consumption. The Bayside Cumulative Impacts Analysis incorporated the ABAG Projections 96-based citywide growth plus all other foreseeable projects that would make a difference in hydrologic impact. The resulting projected flows in 2015 will be well within the dry-weather capacity of the City wastewater treatment system. The projected sanitary sewer flows are consistent with those used for forecasting City water needs and wastewater system needs.

Stormwater flows in the City system are not dependent on population and employment but are most closely related to three different factors: the amount and intensity of rainfall, the land area that drains to the City sewers, and the runoff coefficient (which depends on overall permeability of the land surface in each drainage area). The first factor varies considerably from year to year; the long-term average rainfall amount for San Francisco is about 21 inches. The second and third factors will change



as anticipated development occurs in Mission Bay, Candlestick Park, Hunters Point Shipyard, and on waterfront piers and other Port property from which stormwater is not currently collected into the City system, and such development provides storm sewers to convey stormwater into the system. The acreage and runoff coefficients for all these areas from which stormwater inflows would substantially increase was calculated, and the resulting cumulative stormwater volumes incorporated into the cumulative Bayside Planning Model analysis. The reason for including these four projects in the Bayside Cumulative Impact Analysis report is not because they are the only projects analyzed in the cumulative analysis, but because they would increase stormwater flows, unlike most other cumulative development in the City which would be located in areas that are already substantially paved and sewered. Dry-weather sanitary flows from these other projects are accounted for in the analysis, as described above.

The sanitary sewage (dry weather) flow component of wastewater, now and in the foreseeable future, is well within the treatment capacity of the City's Bayside facilities. During wet weather, this flow is dwarfed by stormwater flows resulting from intense rain. When combined sewer overflows (CSO) occur, they are comprised of mostly stormwater (about 94% stormwater and 6% sanitary sewage). Thus, Mission Bay's contribution to changes in the sanitary sewage portion of CSOs would be very minor compared with overall stormwater volumes. While the projected increase in future cumulative sanitary sewage volume is based on the best available information and assumptions about future growth and per capita consumption trends, even a considerable underestimate (i.e., a few million gallons) would not have a material effect on the forecast changes in CSOs. Furthermore, while the cumulative forecast (as with any forecast) is subject to error, any such error would not change the project's effects on the frequency and quantity of CSOs, as described in the SEIR. If the wastewater and resulting water quality effects of cumulative growth turn out to be understated, then the project's percentage contribution to the cumulative effects would have been overstated in the SEIR. In either case, the SEIR's description of significant cumulative impacts and the mitigation measures suggested to eliminate the project's contribution to the significant impacts would not change.

Regarding the specific projects itemized by various comments, Treasure Island wastewater and Presidio stormwater are not processed by the Bayside facilities, and are thus not relevant to the analysis. Specific development proposals, such as those in and near Yerba Buena Center and specific office development, are accounted for in ABAG projections of population and employment, as are ongoing infill residential, live/work, and other population and employment-accommodating development.

Implementation of the SPUR rezoning proposal is highly speculative and is not appropriate to assume as part of the future cumulative analysis, as discussed in General, "Cumulative Impacts from Other Projects," on pp. XII.15-XII.19. The area already has sewers and so, even if such a rezoning proposal

were to be adopted and substantial development were to occur, the only wastewater effect would be on sanitary sewage flows, which (as described above) would still be well within treatment capacity and would constitute only a very small portion of CSOs. Ongoing development in the Central Waterfront area is accounted for in the Bayside Planning model based upon ABAG projections.

Regarding the project-related increase in flows to the Southeast Water Pollution Control Plant in the Bayview-Hunters Point area, refer to the response regarding "Environmental Justice" on pp. XII.378-XII.392.

### **Wastewater Flows**

#### ***Comment***

The amount of sewage generated by the MB/UC-SF project is listed as 2.4 mgd and given a value of 2.8% increase. That seems to be derived by dividing it over the total for the whole City or 84 mgd. In the Vol 2.M.47 (Utilities) the 2.4 mgd sewage is said to be [3.7%] of the 67 mgd currently treated by the S.E. Treatment Plant.

Should chart V.K.34 be adjusted. If this is an error can you check other areas of the report and change the numbers. Can you check that this mistake is not made in the cumulative analysis? (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

#### ***Response***

This comment refers to apparent inconsistencies between information presented in Section V.M, Community Services and Utilities, and Section V.K, Hydrology and Water Quality. The discussion under "Sewers and Wastewater Treatment" on p. V.M.43 focuses on Project Area flow generation (i.e., what flows into the pipes), so it relates to infrastructure capacity. The discussion under "Changes in Discharges to Receiving Waters" on pp. V.K.30-V.K.40 focuses on discharges (i.e., what flows out of the pipes) and their effects on the quality of receiving waters. Under "Wastewater Generation" on p. V.M.47, the SEIR states that about 0.1 million gallons per day (mgd) of wastewater are now generated in the Project Area, and with the project, the Project Area flow would increase by about 2.4 mgd to about 2.5 mgd. The potential increase of 2.4 mgd would be in addition to the approximately 67 mgd of wastewater currently treated at the Southeast Water Pollution Control Plant and the existing citywide total wastewater volume of about 84 mgd. The text of p. V.M.47 specifies that these flows refer to average dry-weather flows, which consist primarily of sanitary sewage. On the other hand, the flows summarized in Table V.K.1 on p. V.K.34 combine dry- and wet-weather flows. The effluent flows presented in Table V.K.1 refer to the portion of combined stormwater and sanitary sewage that receives secondary or primary treatment prior to discharge. These data are derived from the Bayside Planning Model (discussed under "Changes in Discharges to Receiving



Waters” on p. V.K.30 and on p. J.5 of Appendix J), which estimates the contribution of Project Area stormwater runoff to the flows managed by the Bayside facilities. Therefore, no changes are needed in Table V.K.1, which also correctly estimates cumulative flows managed by the Bayside combined sewer system.

**Comment**

Could you make the chart V.K.34 clearer in terms of breaking down volumes of primary and secondary sewage processed. If and when you do an analysis of a real years worth of effluent, could you do the same? (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

**Response**

With regard to providing the wastewater volumes that receive primary and secondary treatment, Table XII.10 converts the percentages listed in Table V.K.1 of p. V.K.34 into actual volumes. The comment also requests that the same information be provided for a real year of data. With the exception of the stormwater data presented in Table V.K.1, the figures presented in Table V.K.1 are based on the results of the Bayside Planning Model, which represent the results of 70 years of real weather data obtained from the National Weather Service. Stormwater flows for the Project Area were estimated assuming average annual rainfall of 21 inches. As discussed in the response regarding “Rainfall Data Used in the Bayside Planning Model,” pp. XII.307-XII.311. This value is the actual average rainfall that has fallen in San Francisco over the last 90 years.

**Comment**

Further, 14.1 hours tells users nothing about volume of partial treated sewage entering the creek and bay. There are no volume or mass limits for CSOs, and events are counted only if there is a 6-hour break in flow. This means that an intermittent 3-day, 1 million gallon event would be equal to a 2-hour, 1000 gallon event. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

**Response**

The comment requests the volume of combined sewer overflows attributable to the project. Table V.K.1 on p. V.K.34 presents the projected average volumes of combined sewer overflows (CSO) with and without the project. Table XII.10 provides the magnitude of the actual average change anticipated. Overflow volumes were estimated by the Bayside Planning Model, which estimates total flows on the basis of mass balance calculations. Taken together, the SEIR information about projected CSO annual average frequency, volume, and duration adequately describes existing, project, and cumulative CSO conditions. The main water quality analysis was based on long-term annual average volumes, which would not vary despite differences from year to year in frequency and duration. The

**TABLE XII.10**  
**CHANGES IN EFFLUENT, OVERFLOW, AND STORMWATER VOLUMES**

|   | <u>Bayside Base Case +<br/>Proposed Sewer System<br/>for Mission Bay Project</u> |                        |                                     | <u>Bayside Base Case +<br/>100% Combined<br/>Sewer System for<br/>Mission Bay Project</u> |                                     | <u>Cumulative Bayside</u> |                                     |
|---|--|------------------------|-------------------------------------|---|-------------------------------------|---------------------------|-------------------------------------|
|   | <u>Bayside<br/>Base Case</u>   | <u>Flow<br/>Volume</u> | <u>Change<br/>from<br/>Existing</u> | <u>Flow<br/>Volume</u>  | <u>Change<br/>from<br/>Existing</u> | <u>Flow<br/>Volume</u>    | <u>Change<br/>from<br/>Existing</u> |
| Total Effluent (MG/yr)                  | 30,203   | 31,045                 | 842                                 | 31,045  | 842                                 | 31,496                    | 1,293                               |
| Total Overflows (MG/yr)                 | 910  | 912                    | 2                                   | 928   | 18                                  | 1,008                     | 98                                  |
| Total Bayside Flow<br>(MG/yr)/a/        | 31,113   | 31,957                 | 844                                 | 31,973  | 860                                 | 32,504                    | 1,391                               |
| Flow Treated                            |  |                        |                                     |   |                                     |                           |                                     |
| Secondary                               | 27,162   | 27,962                 | —                                   | 27,944  | —                                   | 28,246                    | —                                   |
| Primary                                 | 3,018  | 3,100                  | —                                   | 3,069   | —                                   | 3,250                     | —                                   |
| Project Area Stormwater<br>Flow (MG/yr) | 15.6   | 15.9                   | 0.4                                 | 0   | -15.6                               | 15.9                      | 0.4                                 |

Notes:

MG/yr = million gallons per year

a. Total Bayside Flow is the sum of Total Effluent and Total Overflows

Source: City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998; EIP Associates.

duration was emphasized only in the discussion of water-contact recreation effects, as it is most relevant to the length of beach closures.

### **Comment**

. . . [T]he EIR. . . fails to clearly analyze wet-weather flows from the project site. Although the EIR includes an analysis of cumulative stormwater flows (which is critiqued below), the EIR fails to provide a calculation of wet-weather flows that would flow from the Mission Bay project area alone. There is also no calculation of how flows from Mission Bay would impact available wet-weather treatment capacity at the Southeast Plant. These numbers must be included in the Final EIR, and impacts must be acknowledged where they would exist. If new significant impacts are identified, then the Draft EIR must be recirculated for further public comment. (*Kate White, Program Director, Urban Ecology, Inc.*)



**Response**

Table V.K.1 on p. V.K.34 presents both dry- and wet-weather flows. Combined sewer overflows (CSO) and stormwater runoff, both wet-weather effects, are evaluated under "Volume and Quality of Treated Combined Sewer Overflows" on p. V.K.36, "Volume and Quality of Direct Stormwater Discharges to Bay" on pp. V.K.38-40, and "Near-Shore Effects" on p. V.K.42-V.K.50. Because the project would not involve any physical changes to the Southeast Water Pollution Control Plant, it would not affect the wet-weather treatment capacity of the plant. When operations at the Southeast and North Point Water Pollution Control Plants reach capacity, CSOs occur. As demonstrated by the increased duration of typical CSOs by up to 11 minutes at some outfalls (as reported under "Effects on Water-Contact Recreation" on pp. V.K.49-V.K.50), the project would increase the amount of time each year that the Southeast Water Pollution Control Plant would operate at peak capacity. Nevertheless, the project would not increase wastewater flows sufficiently to adversely affect the operation or capacity of the treatment plant.

**Comment**

Moreover, the Table [Table V.K.1] fits into a style exhibited throughout the SEIR of the underemphasizing the volumes of waste being discussed, in this instant by its emphasis on percentage increases and numeric shorthand which, for many members of the public, would not readily indicate the actual volumes being discussed. Thus, the volumes corresponding to the percentages provided in the third column are the following: a 2.8% increase in sewage plant effluent equals 842 million gallons; a 0.22% increase in sewage overflows equals 2 million gallons of sewage; a 2.7% increase in total Bayside flows equals 844 million gallons and a 2.3% increase in storm water flows equals 300,000 gallons. On the cumulative side of the Table (the 7th column): a 4.3% increase in sewage plant effluent equals 1.3 billion gallons more effluent through the Hunters Point plant and an 11% increase in sewage overflows equals 98 million gallons of sewage flowing to the Bay. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

**Response**

Table V.K.1 provides the information necessary to understand the changes in wastewater and stormwater flows. For the sake of clarity, Table XII.10 replaces the relative increases (percent changes) with the magnitude of the changes. As shown in Table XII.10, the change in direct stormwater discharges from the Project Area is about 2.3% of 15.6 million gallons per year (MG/yr), which is approximately 0.4 MG/yr. The values of both the stormwater discharges from the project area for existing and project conditions have been rounded to three significant digits.

The water quality impacts of the project do not relate directly to the percentage or the absolute increases in flows, but the resulting effects on beneficial uses, which are analyzed and described on pp. V.K.30-V.K.55. Also, as a point of fact, combined sewer overflows contain a relatively small fraction (about 6%) of sanitary sewage and a much larger fraction (about 94%) of stormwater, and

receive the general equivalent of primary treatment before discharge; therefore it is misleading to refer to them as "sewage overflows."

**Comment**

The concern is real. The project, as described in the SEIR, plans on discharging 2 million gallons a year of additional sewage overflows to the east side of the City. In addition, it will be close to a billion gallons of effluent going to the Hunters Point plant.

In terms of those CSOs, in terms of the additional 2 million gallons, the burden is disproportionately being placed on Islais Creek. It will be a natural reduction of overflows to Mission Creek. There will be an increase of 14 hours of overflows into Islais Creek. . .

The 2 million additional gallons of CSOs into Islais Creek primarily, the project shouldn't be increasing it by 2 million; should be shooting to decrease it by 2 million. This [is] exorbitant.

Instead of increasing the flow through Hunters Point plant of up to almost a billion gallons, it should be holding the line on that effluent stream. (*Michael R. Lozeau, Executive Director, San Francisco Baykeeper*)

**Response**

This comment expresses concern that project-related combined sewer overflows (CSO) would primarily and disproportionately affect Islais Creek. It also states a desire that wastewater flows at the Southeast Water Pollution Control Plant not increase.

The existing combined sewer system, including the Southeast Plant, was designed to accommodate growth such as the Mission Bay project. The dry-weather and wet-weather National Pollutant Discharge Elimination System (NPDES) permits also anticipate this growth.

According to the results of the Bayside Planning Model, the project would affect CSOs at only the Channel, Mariposa, and Islais Creek outfalls. The average annual CSO volume at the Channel would decrease about 4%, from 351 million gallons per year (MG/yr) to 337 MG/yr. At the Mariposa outfalls, the volume would increase about 11%, from 9.7 MG/yr to 10.8 MG/yr. At Islais Creek, the volume would increase about 3%, from 481 MG/yr to 497 MG/yr./37/ As discussed under "Effects of Treated Combined Sewer Overflows" on p. V.K.43, organisms in the near-shore environment are, and would continue to be, able to tolerate exposure to treated CSOs, and the incremental project-related increases in CSO volumes would not result in significant impacts related to sediment quality and water-contact recreation. Likewise, the SEIR does not identify significant impacts related to project-related effluent flows at the Southeast Plant; therefore, there is no basis for mitigation that would reduce wastewater flows to the Southeast Plant. For discussion of the potential for disproportionate



impacts in the Bayview-Hunters Point area, refer to the response regarding “Environmental Justice,” on pp. XII.378-XII.392.

## **Stormwater Quality**

### ***Comment***

The SEIR’s characterization of urban storm water as “a large volume, lightly contaminated waste stream” is misleading. Vol. II at V.K.24. The Regional Board generally disagrees with the notion that storm water discharges are “lightly contaminated.” See Basin Plan at 4-2 (“nonpoint sources are now generally considered to be the largest source of pollutants to aquatic systems”). Of the various pollutants currently impairing Central San Francisco Bay, both copper and diazinon are being discharged in large quantities through storm water systems See e.g. State Water Resources Control Board Resolution No. 98-055, 1998 California 303(d) List at 12; Cooper, Ashli, “Diazinon in Urban Areas” (City of Palo Alto, 1996). Moreover, anyone simply looking at storm water flowing along any curb is likely to observe a clear visible sheen, evidencing the significant quantity of oil mobilized by storm water. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

The statement under “Proposed Drainage Plan” on p. V.K.24 that urban stormwater is a “lightly contaminated waste stream” is not intended to mislead readers by suggesting that stormwater runoff is innocuous. Instead, the statement is intended to compare the concentrations of pollutants in stormwater with those found in sanitary sewage. The concentrations of most pollutants in untreated stormwater are much less than those in untreated municipal wastewater. However, because stormwater flows in the Bay Area are relatively large compared to municipal wastewater flows, stormwater can contain relatively large pollutant loads, despite the relatively low pollutant concentrations. The context of the statement was to contrast our present understanding of stormwater pollution with outdated notions that stormwater is uncontaminated.

## **Designation of China Basin Channel and Islais Creek as Toxic Hot Spots**

### ***Comments***

No study has been performed on the pollutant loadings of the excess stormwater (up to 20%) that would not be captured and treated at SWPCP nor on the effects of such pollutants on Mission Creek. In view of the conclusions of consultants that pollutants from contaminated soils are unlikely to reach the Creek from the Project site, and the fact that the Creek was dredged in the mid-1970’s when the Fourth Street ramps to I-280 were built, it is logical to conclude that the high levels of toxics (especially heavy metals) in the top 5 centimeters of sediment in the Mission Creek Channel are of recent origin, rather than from historical industrial uses, and result primarily from combined sewer overflows in wet weather, which consist largely of high volumes of stormwater. As it may be years before the existing contaminants are removed by such direct intervention, it makes sense to reduce or

eliminate the addition of more pollutants so that current contamination levels will not worsen and may actually modestly decline through dispersion. . .

Such questions as the following should be answered: To what extent will the proposed influx of stormwater and sewage overflows re-suspend toxics already in the creek bed sediments? (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

The DEIR, table V.K.1, predicts a conservative annual increase of close to 1 billion gallons of wastewater.<sup>4</sup> This includes an annual increase of two million gallons of partially-treated CSOs that will severely burden toxic hotspots already identified at Mission Creek and Islais Creek.<sup>5</sup> In the mid 1970's, when Mission Creek was dredged to help build the street ramp for Route 280 freeway, it was found to have high levels of toxic metals in the top 5 centimeters. The RWQCB concluded that Mission Creek high levels were a result of CSOs which carry high volumes of stormwater.

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<sup>4</sup> This estimate is based on a rainfall average of 21 inches. National Weather Service: San Francisco rainfall 1994-95, 34.02 inches; 1995-96, 24.89 inches; 1996-97, 22.63 inches, and 1997-98, 47.07 inches.

<sup>5</sup> RWQCB, San Francisco Bay Region, Proposed Regional Toxic f Cleanup Plan, December 1997.

(*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

In view of the conclusions of the consultants looking at contaminated soils and groundwater<sup>1</sup>, and the fact that the Creek was dredged in the mid 1970's when the 4th Street ramps to the 280 freeway were built, it appears that the high levels of toxics (particularly heavy metals) found in the top 5 cm. of sediment in Mission Creek (China Basin Channel), which have led the RWQCB to conclude that Mission Creek is the second worst toxic hot spot in San Francisco Bay, are contemporaneous (not from historical uses). They are most probably the result of combined sewer overflows (CSOs) which occur during wet weather, and which primarily consist of high volumes of stormwater.

While the RWQCB has proposed that Mission Creek be listed as a "candidate" toxic hot spot for cleanup, a cleanup plan is yet to be proposed, let alone evaluated in terms of cost-benefit, or funded. Since it may be many years before the existing contaminants are removed, if ever, by a formal cleanup, it seems logical to presume that a reduction or elimination of additional pollutants would, over time, help reduce the existing levels through dispersion.

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<sup>1</sup> The tidal influence study and the tidal influence model support the "attenuation" theory that metal concentrations in groundwater meet water quality standards when they get to Mission Creek or the Bay, and the technical documents support the conclusion that the near shore aquatic community is not at risk from Volatile Organic Compounds (VOCs) or Petroleum Hydrocarbons (TPH-gasoline, TPH-diesel, TPH-motor oil, BTEX compounds and naphthalene) found as COPECs (chemicals of potential ecologic concern) in groundwater.

(*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

The Regional Water Quality Control Board (RWQCB) has recently listed both China Basin Channel and Islais Creek as "candidate" toxic hot spots. Although the Draft EIR implies that this designation carries no regulatory weight, the designation should be of considerable concern nonetheless. CSO



exceedances, which will be exacerbated by the Mission Bay project and cumulative projects, would affect water quality at both of these locations. Given that the RWQCB is already concerned about unacceptable levels of toxicity at these locations, there is all the more reason that additional CSO exceedances should be considered significant impacts in the EIR. (*Kate White, Program Director, Urban Ecology, Inc.*)

The SEIR's discussion of the Bay area Regional Toxic Hot Spot Plan misstates the significance of that report, which lists both Mission Creek and Islais Creek as candidate toxic hot spots. Vol. II at V.K.14. The SEIR is incorrect in stating that "Candidate toxic hot spots are not considered 'known' toxic hot spots without further study." *Id.* As the Hot Spot Plan makes clear, the only thing standing between candidacy and known for Mission and Islais Creeks is a hearing before the State Board where it will be asked to concur with the findings already proposed by the San Francisco Regional Board. Hot Spot Plan at 9. As for new information, the Hot Spot Plan states that, as regards Mission and Islais Creeks, "[w]e have not received some of the data from th[ese] site[s]. These data could provide additional evidence that this site is impacted. Therefore, after we receive and analyze these data this site may be changed to a rank of high." Hot Spots Plan at 28 (Ranking Matrix). Hence, the notion put forth in the SEIR that the candidate list is "preliminary" is far from accurate. Both Mission and Islais Creeks are truly impaired with toxic constituents. . .

In discussing the estimated 2 million gallon average increase per year of sewage overflows to Mission and Islais Creeks anticipated by the project, the SEIR fails to acknowledge that those two creeks already are not meeting water quality standards applicable to the rest of San Francisco Bay. Vol. II at V.K.36. Indeed, they have been identified as candidate toxic hot spots by the Regional Board. In addition, Table V.K.3, to the extent it suggests no net increase in loadings of the listed pollutants does not provide a useful analysis of the additional loads that must occur if the project increases overflows by 2 million gallons. Of course, as mentioned above, the discussion and table only refer to average rainfall events, underestimating actual increases that will occur during normal high rain years. It also is important to note that overflows, on average, occur 10 times per year. Thus, on average, each set of overflow events during a specific rain event (from various outfalls) is, according to Table V.K.3, expected to contribute 47 lbs of lead to [the] local Bay environment! Similarly, each set would add 30 lbs of copper to waters already impaired by that pollutant. A preventable increase of even 1 lb of toxic pollutants such as those should not be taken lightly. In addition, the discussion fails to mention pollutants such as PCBs, chlorpyrifos and chlordane, elevated levels of which form part of the rationale for listing Islais and Mission Creeks as Candidate Toxic Hot Spots. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

In view of the conclusions of the consultants looking at contaminated soils and groundwater and the fact that the creek was dredged in the mid-'70s when the Fourth Street ramp to the 280 freeway was built, it appears that the high level of toxics, particularly heavy metals, which have led the Regional Board to conclude that Mission Creek is the second worst toxic hot spot in San Francisco Bay, are contemporaneous, not from historical uses, and most probably the result of combined sewer overflows which occur during wet weather and which primarily consist of high volumes of storm water.

While the Regional Board has proposed that Mission Creek be listed as a candidate toxic hot spot for cleanup, a cleanup plan has yet to be proposed, let alone evaluated in terms of cost benefit or funded.

Since it may be many years before the existing contaminants are removed, if ever, by a formal cleanup, it seems logical to presume that a reduction or elimination of additional pollutants would over time help reduce the existing level through dispersion.

Since Mission Creek is a key focal point of the residential development and provides badly needed open space to offset high density, particularly as respects Mission Bay North. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### *Response*

These comments contend that the SEIR fails to study how stormwater and combined sewer overflow (CSO) pollutant loadings could affect China Basin Channel (Mission Creek), which one comment calls the second worst toxic hot spot in the Bay. The comments suggest that, given the already unacceptable levels of pollutants in the Channel and Islais Creek, additional CSO and stormwater discharges should be considered significant impacts. Several comments suggest that existing CSOs are primarily responsible for contamination of the Channel and Islais Creek and call for the reduction of pollutant discharges to improve existing conditions in the Channel and Islais Creek.

One comment requests that the SEIR text be modified to better reflect the difference between “candidate” toxic hot spots and “known” toxic hot spots. In response to this request, the last two sentences on p. V.K.14 have been replaced with the following:

~~“Candidate” toxic hot spots are not considered “known” toxic hot spots without further study. More data would need to be collected and analyzed, and a public hearing process would need to be conducted before China Basin Channel and Islais Creek were considered “known” hot spots.~~ “Candidate” toxic hot spots are not considered “known” toxic hot spots until hearings are held by both the RWQCB and the State Water Quality Control Board./31a/ China Basin Channel and Islais Creek would be considered “known” toxic hot spots if and when they are included in a Regional Toxic Hot Spot Cleanup Plan adopted by the RWQCB and approved by the State Water Quality Control Board. Both sites have been proposed for inclusion by the RWQCB./31b/

Also, the following two endnotes have been added to p. V.K.66.

- 31a. Regional Water Quality Control Board, San Francisco Bay Region, *Proposed Regional Toxic Hot Spot Cleanup Plan*, December 1997, pp. 6-9.
- 31b. Regional Water Quality Control Board, San Francisco Bay Region, *Proposed Regional Toxic Hot Spot Cleanup Plan*, December 1997, p. 23.

In response to the other comments, the SEIR describes in detail how project stormwater and CSO discharges could affect the near-shore environment, including the Channel and Islais Creek. These issues are addressed beginning at “Effects on Receiving Waters” on p. V.K.40 and continuing through



“Cumulative Issues” on pp. V.K.50-V.K.55. The SEIR concludes that the project, by itself, would have little effect on water quality; however, it also concludes that the project could contribute to potentially significant cumulative impacts to the near-shore environment from increased CSO and stormwater discharges. The SEIR conservatively concludes that the project could contribute to this cumulatively significant impact, despite the relatively small loads associated with the project. Mitigation Measures K.3 and K.4 on p. VI.47 are intended to reduce pollutant discharges to near-shore waters, including the Channel and Islais Creek. The City’s facilities operate according to, and fully comply with, existing water quality-based permit conditions, and no evidence has been provided in the comments that refute existing data on effects of CSOs (see the responses under “Wet-Weather NPDES Permit,” pp. XII.371-XII.376, and “Reductions in Combined Sewer Overflow Volumes,” pp. XII.295-XII.298).

Table V.K.3 on p. V.K.37 does not understate the foreseeable project-related increase in CSO pollutant loads. Under “Volume and Quality of Treated Combined Sewer Overflows” on p. V.K.36, the SEIR indicates that the increase in CSO volumes would be about 0.22% and states that, for analysis purposes, the foreseeable increases in CSO pollutant loads are assumed to be proportional to increases in CSO volumes. Because the increase in CSO volumes would be about 0.22%, the foreseeable increase in pollutant loads would also be about 0.22%. This relatively small increase is generally less than the level of uncertainty associated with the pollutant loads estimated for the base case. To avoid representing an unwarranted level of precision in these estimates, all numerical estimates in Table V.K.3 have been rounded to two significant figures. As shown in Table V.K.3, the increase of 0.22% would result in pollutant loads that would probably not be measurably different from those of existing conditions. In this way, the analysis discloses the nature of the impacts under study in accordance with accepted scientific and statistical practices.

Although the Channel is a candidate toxic hot spot, the RWQCB has not characterized it as the “second worst toxic hot spot in the San Francisco Bay.” According to the RWQCB’s “Proposed Regional Toxic Hot Spots Cleanup Plan,” three sites the RWQCB considers “High Priority Candidate Toxic Hot Spots” include San Francisco Bay (in its entirety), Point Potrero/Richmond Harbor, and Castro Cove./38/ Recognizing the concerns about water and sediment quality in the creeks, the SEIR analyzes and discusses the effects of CSOs and stormwater discharges on sediments in the Channel and Islais Creek (see “Effects of Mass Pollutant Emissions on Sediment Quality” on p. V.K.48 and “Sediment Quality” on p. V.K.53).

Regarding potential sources of polychlorinated biphenyls (PCBs), chlordane, and chlorpyrifos in the Channel and Islais Creek, PCBs are of concern primarily in Islais Creek, whereas chlordane and chlorpyrifos are of concern in both Islais Creek and the Channel. Other contaminants in the Channel

include silver, chromium, copper, lead, antimony, and zinc./39/ The SEIR discusses sources of PCBs under “Impairment of Central San Francisco Bay” on p. V.K.9. PCBs have historically been used for their chemical stability in electrical equipment and other applications. Chlordane has been used as an insecticide against ticks and mites on corn crops, citrus crops, lawns, and gardens. Chlorpyrifos is commonly found in flea control products and is presently marketed under the trade names “Dursban,” “Lorsban,” and “Pyrinex.” Because PCBs are no longer manufactured in the United States and chlordane is not registered for use in California, the project would not create new sources of PCBs or chlordane. PCBs and chlordane from past and ongoing activities could enter project-related stormwater, however. Similarly, because chlorpyrifos is readily available in commerce, it could also be found in project-related stormwater. The project would likely increase discharges of these pollutants as stormwater flows increase and land use changes in the Project Area result in more impervious surfaces; the increases would probably be similar to the ranges of increases shown for the pollutants listed in Table V.K.4 on p. V.K.39.

Table V.K.4 estimates pollutant loads associated with Project Area stormwater discharges, illustrating that stormwater pollutant loads could increase from 10% to 60%, depending on the pollutant considered. These data are derived from a stormwater quality study commissioned by the Bay Area Stormwater Management Agencies Association (BASMAA)./40/ Concentrations of many pollutants are highly variable and difficult to measure in stormwater. The results published by the BASMAA are based on recent and locally collected data. However, BASMAA monitoring data are not available for some pollutants, such as PCBs, chlordane, and chlorpyrifos.

Regarding the potential for CSOs to contribute to contamination of the Channel and Islais Creek, the relationship of past CSOs to water quality in these inlets is unknown, because (as explained in the SEIR on pp. V.K.13-V.K.14) the Channel and Islais Creek have been subject to numerous historical polluted discharges. Pollutants in current and future CSOs and other City wastewater system discharges do not and would not contribute to degradation of sediments in either location, as determined by the RWQCB in issuing the NPDES permits for the City system. See “Wet-Weather NPDES Permits” on pp. XII.371-XII.376 and “Reductions in Combined Sewer Overflow Volumes” on pp. XII.295-XII.298.

As the comments have suggested, the Channel may have been dredged in the 1970s because the Bay Conservation and Development Commission issued the Port of San Francisco a permit (No. 3671) for maintenance dredging there in 1972./41/ That permit would have allowed the Port to have dredged the Channel to a depth of 32 feet below mean lower low water. The Bay Conservation and Development Commission does not maintain any records from that time that would confirm whether the dredging actually occurred. Port of San Francisco records are not available for the period before 1986 (dredging



has not occurred in the Channel since then)./42/ Staff at the U.S. Army Corps of Engineers are unable to locate any record of dredging in the Channel using their permit database./43/

Regarding the potential for contaminated groundwater in the Project Area to affect the Channel, refer to Contaminated Soils and Groundwater, "Metals in Groundwater," pp. XII.215-XII.223.

Regarding the use of average rainfall in performing these calculations, refer to the response regarding "Rainfall Data Used in the Bayside Planning Model," pp. XII.307-XII.311, which explains that the SEIR appropriately analyzes representative possible future conditions consistent with scientific practice. CEQA requires analysis of reasonable, realistic conditions, as best as can be estimated.

#### Adequacy of Water Quality Data for China Basin Channel and Islais Creek

##### ***Comment***

Although the project sponsors conducted an extensive sampling program on soils and groundwater at the project site, no new data was collected relating to water quality in Mission and Islais Creeks. Indeed, the SEIR notes that "no comprehensive water quality data have been collected for China Basin Channel [i.e. Mission Creek] since. . .1979. . .And the most recent data for Islais Creek are from studies conducted by the City. . .in 1985." (Vol II at V.K.12). If the discussion in the SEIR reflects the contents of that 19 year old and 13 year old data, the studies did not look at metals, organics or other pollutants of concern but were limited to pH, coliforms and dissolved oxygen (which appear to show violations of water quality standards during dry and wet seasons). Hence, no recent data, reflecting all of the pollutants of concern in the Central Bay, is available to support any conclusion that the CSO discharges are less than significant. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

##### ***Response***

The comment criticizes the SEIR for not including up-to-date sampling results for the Channel and Islais Creek, noting that substantial effort has been devoted to collecting recent soil and groundwater data. It suggests that the sampling results from the 1980s demonstrate violations of water quality standards and contends that no recent data support the SEIR's impact conclusions regarding combined sewer overflow (CSO) discharges.

The comment is correct in that no new sampling effort was undertaken in the Channel or Islais Creek specifically for this SEIR. The SEIR relies on recent CSO and effluent monitoring data and available data about stormwater discharge constituents to analyze water quality impacts of the project. New sampling data to establish current water quality conditions are not necessary for the analysis and conclusions in the SEIR. Whether new data indicated that water quality in the creeks is better, worse, or the same as previously found, the very small pollutant increments estimated to be generated by the

project would not change, and therefore the project impacts as disclosed and discussed in the SEIR would not change. More current water quality data is not considered necessary or helpful for this project's impact analysis, and was also not obtained or considered necessary for the 1990 FEIR. In contrast, the recent soil and groundwater sampling was necessary to develop specific risk management and remediation strategies for development of the Project Area.

The data regarding existing water quality in the Channel and Islais Creek are adequate for the purpose of the SEIR's analysis of the effects of increasing CSO and stormwater volumes. First, under "China Basin Channel and Islais Creek" on pp. V.K.11-V.K.14, the SEIR acknowledges that both the Channel and Islais Creek may be degraded, having been designated candidate toxic hot spots by the RWQCB. Second, under "Volume and Quality of Treated Combined Sewer Overflows" on p. V.K.36 and "Effects of Treated Combined Sewer Overflows" on pp. V.K.43-V.K.46, the SEIR uses recent CSO monitoring data from 1995, 1996, and 1997 (see Table V.K.3 on p. V.K.37) to assess the effects of the project on the near-shore environment. Completion of the Wastewater Master Plan projects in 1997 has substantially reduced the volume and improved the quality of CSO discharges, and causal (cause and effect) relationships between CSO and stormwater discharges and water quality have not been established, so that older studies cannot be used to accurately infer present water quality conditions.

## Water Quality Criteria

### *Comment*

The evaluation of near-shore effects of CSO's is inadequate:

- Only concentrations are evaluated; not loads
- Only acute toxicity is evaluated (p. V.K.44); chronic toxicity is ignored.

*(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter])*

### *Response*

Contrary to the comment's assertion, the SEIR estimates both pollutant loads and concentrations. Table V.K.3 on p. V.K.37 shows pollutant loads in CSOs under base case and proposed project conditions. While water quality *concentration* standards have been established for San Francisco Bay, quantitative standards relating specifically to pollutant *loads* have not been developed by the City and County of San Francisco, the State Water Resources Control Board, or the Regional Water Quality Control Board. Therefore, the SEIR uses quantitative, concentration-based screening levels derived from the Basin Plan and other authoritative sources in its analysis. These screening values are not regulatory or permit requirements for discharge concentration at outfalls (as used in the SEIR), but they are useful yardsticks for conservative EIR comparisons. As explained under "Effects of Treated



Combined Sewer Overflows” on p. V.K.44, acute toxicity water quality screening values were used to evaluate CSO pollutant concentrations because CSOs are a transient phenomenon. Organisms would be exposed to undiluted or slightly diluted CSOs for short durations (e.g., a few minutes or hours) rather than the longer durations associated with chronic effects.

***Comment***

The 1979 Bayside Overflow studies referenced at Vol. II, page V.K.9 downplay the significance of the City’s CSO discharges. For example, the reference to dilution effects in Mission and Islais Creeks is directly contrary to the general prohibition in the San Francisco Bay Basin Plan prohibiting discharges into shallow water areas and prohibiting the application of dilution factors in those instances where discharges are allowed in exception of that policy. Similarly, the discussion does not, nor could it, state that CSO discharges do not violate the water quality standards applicable throughout the Bay. Indeed, a significant omission from the discussion, indeed from the entire SEIR, is the long history of the City’s request for exceptions from those very standards. The fact that fish and other biota do not immediately die (i.e. In 1979, there was no evidence of acute toxicity) is little proof that CSO overflows are good for the creeks. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

***Response***

This comment refers to the discussion of combined sewer overflow (CSO) effects under "Near-Shore Bayfront Waters" on p. V.K.9, noting that the Basin Plan prohibits discharges into shallow water and that, where exceptions are made to this policy, no allowance for dilution may be made in evaluating the effects of such a discharge. Table V.K.6 on p. V.K.45 shows the concentrations of various pollutants in CSOs discharged to near-shore waters. These concentrations were estimated assuming no dilution, in accordance with the Basin Plan methodology. However, the SEIR also explains that some dilution of CSOs actually does occur in the environment (see p. V.K.44). As discussed on p. V.K.44, dye studies undertaken to determine the extent of this dilution have indicated that, in most cases, mixing with Bay waters occurs fairly rapidly with observed initial dilutions ranging from 1:1 to more than 300:1. By assuming no dilution of CSOs, the SEIR provides a conservative analysis. An endnote was inadvertently omitted from the Draft SEIR. The reference mark for Endnote /66a/ has been added to p. V.K.44 at the end of the second sentence of the second paragraph, and Endnote 66a has been added to p. V.K.68 as follows:

/66a/ **City and County of San Francisco, *Bayside Overflows*, prepared by CH2M Hill, June 1979.**

Regarding the comment that the survivability of fish does not prove that CSOs are good for the creeks, the SEIR does not offer any simplistic judgment about whether CSOs are “good” or “bad”; rather, it describes the results of various water quality studies of nearshore waters on pp. V.K.9-V.K.13. The analysis in the SEIR shows that project-related changes to treated CSO discharges would not

significantly impact nearshore waters based on the fact that the project would not materially affect the concentration of pollutants in treated CSOs, the nearshore sediment quality, or water-contact recreation (see pp. V.K.46-V.K.50).

Current CSO discharges do not violate any applicable water quality standards and, as a result of facility design and CSO treatment, provide adequate protection of beneficial uses/44/. The City does not operate under any exception to water quality standards. The RWQCB has granted exceptions to specific requirements, such as shallow water discharge limitations, but only upon finding that, based on evidence, water quality protection would be maintained. The *Bayside Overflows* study was prepared by a respected independent consultant (CH2M Hill) and has been used and accepted by the Regional Water Quality Control Board as well as the City. No evidence has been presented in any of the comments that contradicts the data, analysis, or conclusions of *Bayside Overflows* or the SEIR.

#### *Comment*

The SEIR's assertion that "[t]he critical consideration regarding biological impacts due to pollutant discharge to an aquatic system rests not in the mass load, but in the extent to which discharges to the system serve to increase contaminant concentrations" is incorrect. Vol. II at V.K.41. In fact, controlling the mass loading of pollutants is critical to bringing San Francisco Bay's water quality into compliance with applicable water quality standards. The SEIR acknowledges this in discussing the total maximum daily load and waste load allocation requirements triggered by the Regional and State Boards' impaired waters list. Vol. II at V.K.16-17. See also Basin Plan at 4-2 ("wasteload allocation supports the identification and implementation of the most effective and economically efficient means of achieving water quality objectives. . ." and "for some pollutants, . . . Concentrations in water are not good indicators of their impairment of beneficial uses"). Increases in mass loading, especially of those parameters that already are impairing the Bay, in particular copper, mercury, PCBs, selenium, and pesticides, means that incremental and continual degradation of the Bay continues to occur.

Comparing the City's discharges of essentially raw sewage and other effluent with applicable water quality criteria is not "extremely conservative." Vol. II at V.K.41. It is the relevant comparison and anything above those criteria likely is adversely affecting beneficial uses in the Bay.

A dilution factor of 20 is hardly conservative given the fact that the maximum allowable dilution factor (for constituents not already impairing the Bay) allowed by the Regional Board's Basin Plan is 10! Vol. II at V.K.42. Likewise, the SEIR's observation that "[PUC] staff do not expect the proposed changes to the copper and selenium objectives to cause compliance problems for the City" is very likely incorrect. Id. For pollutants like copper, mercury and selenium, that already are impairing the Central Bay, renewal of the existing permit will consider removing dilution credits for pollutants impairing the Bay (how can dilution occur of the water column concentrations already above the standards?). Hence, the end-of-pipe effluent limits applied to the City's discharge for those pollutants will be equivalent to the applicable water quality criteria (4.9 ug/l for copper, .025 for mercury and 5 ug/l for selenium). The City's current average discharge is at 52 ug/l for copper, .16 ug/l for mercury and 4.4 ug/l for selenium. See Table V.K.5. Thus, with the requisite effluent limitations and assuming current plant performance, the City will more often than not be in violation of the copper and mercury



limits and, to some significant extent, be in violation of the selenium limit as well. Lastly, the conclusion that the increase in effluent [from] the plant will not “cause a substantial degradation” begs the question whether it might cause a normal degradation. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

This comment disagrees with the SEIR statement under “Effects on Receiving Waters” on p. V.K.41 that the critical consideration regarding biological impacts to an aquatic system rests on the extent to which discharges to the system serve to increase contaminant concentrations. The comment quotes the Basin Plan as support for an assertion that the SEIR should have used mass loading rather than concentrations of pollutants. The comment disagrees with the SEIR statement that the approach used to assess effects of treated CSOs is conservative, and suggests that in the future effluent limits imposed by the RWQCB will be so stringent as to place the City in violation on a regular basis.

The SEIR does not present the limited picture suggested by the comments. Mass loads are discussed in the appropriate context. CEQA (Section 21068) defines a significant effect on the environment as a substantial, or potentially substantial, adverse change in the environment. The SEIR analysis is conservative in evaluating the environmental effects of deepwater discharge because it uses the lower end of measured dilution ratios and, in using slack water conditions, assumes the least amount of mixing. The combined sewer overflow (CSO) discharges are not “essentially raw sewage,” as they average about 94% stormwater and about 6% sanitary sewage and they receive near-primary treatment in the transport/storage facilities prior to discharge. The project’s contribution to Bayside discharges would not cause violations of the City’s NPDES permit, and the City is expected to remain in compliance with the regulatory requirements of its permit.

The point of the SEIR text quoted from p. V.K.42 is that individual animals and plants react to the concentrations of contaminants they experience, not to mass loads. The SEIR does not disregard the relationship between pollutant load and pollutant concentration (pollutant load is the product of multiplying pollutant concentration by water volume). As demonstrated in Tables V.K.2, V.K.3, and V.K.4 on pp. V.K.35, V.K.37, and V.K.39, the SEIR acknowledges that the project could increase mass loads of various pollutants to San Francisco Bay. The full paragraph of the Basin Plan text to which the comment refers discusses toxic pollutant management in the larger San Francisco Bay Estuary System. For context, it is quoted below./45/

Wasteload allocations based on the achievement of numerical water quality objectives will provide appropriate protection of beneficial uses for many toxic pollutants. For some pollutants, however, concentrations in water are not good indicators of their impairment of beneficial uses. Instead, wasteload allocations for such compounds are

developed based on mass, rather than concentration, and tissue and sediment concentrations. Typically, mass-based allocations require more extensive technical information of the fate and transport of pollutants in the system than those based on water alone.

The Regional Board implements narrative objectives regarding sediment accumulation and bioaccumulation in several ways. . . In general, pollutants are identified and monitored in both discharges and the aquatic system. At a minimum, limits placed on point and nonpoint discharges take pollutant accumulation into consideration. Ultimately, the goal is to develop system wide, mass-based wasteload allocations for appropriate substances.

Although the project would contribute to the mass loading of pollutants for which the Bay has been determined to be impaired, the project's contribution to this load would be relatively low. As stated on p. V.K.52, the total increase in pollutant load would be less than 3% of the existing Bayside facilities load, which in turn represents about 12% of all municipal discharges in the Bay Area. Municipal discharges and other permitted industrial discharges represent about 1-6% of the total pollutant load to the Bay-Delta estuary. The project would not impede the City's ability to continue to comply with its National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board (RWQCB). Discharge limitations in the NPDES permit ensure that the City's discharges remain consistent with Basin Plan objectives, including those relating to pollutants with the potential to accumulate within the Bay. As stated on p. V.K.52, the RWQCB may initiate a "total maximum daily load" regulatory process that could result in different effluent limitations than those provided in the Basin Plan. The City would have to comply with any changes to its NPDES permits resulting from RWQCB actions. For additional information, refer to the responses regarding "Pollutant Loads and Federal and State Antidegradation Policies," on pp. XII.367-XII.370 and "Consumption of Bay Fish," pp. XII.389-XII.392.

Regarding the comment that the SEIR incorrectly states that its comparison of municipal wastewater effluent to Basin Plan Water Quality Objectives is extremely conservative, the analysis is conservative because it does not account for the full effect of dilution at the deepwater outfall. While Basin Plan guidelines recommend using a dilution ratio of 10:1, this ratio is for the purposes of calculating effluent limitations for deepwater dischargers and to establish a regulatory limit. Calculated effluent limitations for the Southeast Water Pollution Control Plant already exist and are discussed on pp. V.K.18-V.K.19. The purpose of the SEIR is not to establish effluent limitations for the Southeast Plant, but to evaluate the environmental effects of the discharge under actual dilution conditions. The Basin Plan acknowledges, ". . . the actual initial dilution of many deepwater discharges is greater than ten. . ."/46/. As discussed under "Deep Water Effects of Increased Treated Effluent" on p. V.K.42, studies (cited in Endnote 62 on p. V.K.68) have shown that during slack water, when mixing is at a minimum, actual



dilution is between 19:1 to 34:1. A dilution ratio of 20:1 was chosen as a conservative ratio to evaluate end-of-pipe effects under the conservative conditions of slack waters.

Regarding the comment citing the current average discharge concentrations as 52  $\mu\text{g/l}$  for copper, 0.16  $\mu\text{g/l}$  for mercury, and 4.4  $\mu\text{g/l}$  for selenium, Table V.K.5 lists the current average discharge concentrations of copper, mercury, and selenium in Bayside effluent as 8.3  $\mu\text{g/l}$ , 0.07  $\mu\text{g/l}$ , and 0.72  $\mu\text{g/l}$ , respectively, and Table V.K.6 on p. V.K.45 lists the current average discharge concentrations of copper, mercury, and selenium in combined sewer overflows as 39  $\mu\text{g/l}$ , 0.37  $\mu\text{g/l}$ , and 0.85  $\mu\text{g/l}$ , respectively. The source of the comment's concentrations is unknown, but they do not reflect current data. As noted at the bottom of Table V.K.5, the source of the effluent information in the SEIR is a 1997 monitoring report. The Southeast Plant's existing NPDES permit limits discharges of copper, mercury, and selenium to 37  $\mu\text{g/l}$  (daily average), 0.21  $\mu\text{g/l}$  (monthly average), and 20  $\mu\text{g/l}$  (daily or 4-day average). The current average effluent concentrations are well below the NPDES permitted limits, and therefore, existing effluent discharges are assumed to meet the water quality objectives established in the Basin Plan. As noted at the bottom of Table V.K.6, the source of the CSO information in the SEIR is data from 1994/95, 1995/96, and 1996/97 monitoring efforts by the Southeast Water Pollution Control Plant staff. The wet-weather NPDES permit for the Bayside facilities does not specify numerical concentration limits for CSOs.

As for whether possible changes to copper or selenium objectives would result in compliance problems for the City, the SEIR reports on p. V.K.42 that San Francisco Public Utilities Commission (SFPUC) staff do not expect that the copper and selenium objectives proposed by the U.S. Environmental Protection Agency for California would cause compliance problems for the City. This conclusion was based on a comparison of existing copper and selenium discharge data against the copper and selenium objectives in the proposed California Toxics Rule, which has not been adopted as of August 1, 1998. SFPUC staff determined that the City's deepwater effluent discharge would be within the proposed standards. Refer to the response regarding "New Water Quality Standards" on p. XII.376.

### ***Comment***

Table V.K.5 is replete with subtle misrepresentations. To the extent column two consist of a single number as representative of the daily discharge from the Hunters Point plant, one must assume that the numbers represent the average quality of the discharge. Vol. II at V.K.43. If that is true, then half the time, the quality of the discharge is less than that reported in the Table. The Table should include a column reflective of the plants normal "poorest" performance. Similarly, the inclusion in the fourth column of a single number as representative of the "ambient Bay concentration" is not the entire picture. Presumably the offered number is some kind of average of RMP data. In any event, there is no basis described why the specific numbers offered should be deemed reflective of ambient bay

concentration. Lastly, the use of the Basin Plan's 1-hr average objectives provides an overly narrow point of comparison and, for several of the listed pollutants does not reflect the current decisionmaking of the Regional Board. For example, for lead, the 4 day average in the Basin Plan is 5.6 ug/l. Basin Plan at 3-9. That is the criteria generally applied in discharge permits throughout the Bay area, not the 140 ug/l cited at Table V.K.5. Similarly, for mercury, the criteria being cited by the Regional Board is .025 ug/l (the 4 day average), not the 1-hour average of 2.1 ug/l cited in the SEIR Table. The only number offered in the fifth column that actually reflects the water quality criteria applied on a permit level by the Regional Board is the copper criteria. One last comment, the Table fails to evaluate increases in dioxin, PCBs or pesticides, all of which are discharged through the sewage plant. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

This comment takes exception to presenting average effluent and ambient Bay water concentrations and to the use of Basin Plan average 1-hour objectives in Table V.K.5 on p. V.K.43. As noted in footnote (a) in Table V.K.5, the effluent concentration data is taken directly from 1997 monitoring data, the most recent data available. At individual points in time, concentrations could be higher or lower than concentrations measured during the 1997 monitoring year. Therefore, the presentation and evaluation of average pollutant concentrations for 1997 is a reasonable and adequate approach. Temporal variations in concentrations would not affect the impact conclusions of the SEIR. For additional information about the use of averages in the SEIR, refer to the response regarding "Variability and Uncertainty in the Bayside Planning Model Results."

The comment challenges the use of Regional Monitoring Program data to represent ambient Bay concentrations. The use of Regional Monitoring Program data to reflect ambient Bay conditions is consistent with its use in the Basin Plan to represent background concentrations, which the Regional Water Quality Control Board accounts for when calculating deepwater effluent limitations for discharge permits. However, the SEIR evaluates actual effects in the environment. As discussed under "Deep Water Effects of Increased Treated Effluent" on p. V.K.42, the SEIR reasonably assumes an actual dilution ratio of 20:1 (i.e., one part effluent diluted by 19 parts ambient Bay water). This SEIR provides reasonable estimates of ambient pollutant concentrations on the basis of ongoing monitoring efforts.

The comment questions the SEIR's use of 1-hour averages rather than 4-day averages for lead and mercury. The belief that acute objectives are the most appropriate is based on outfall performance. The deepwater outfall at the Southeast Water Pollution Control Plant directs effluent discharge sideways and upward (somewhat analogous to a lawn sprinkler); no discharge is directed downward. Although the discharged effluent is relatively well-mixed (at least 19:1 to 34:1 [see p. V.K.42]) soon after it exits the diffuser outfall, it is less saline, and therefore, lighter, than Bay water, and begins to rise through the water column until it is fully mixed. One could visualize that the discharge from the



Southeast Plant is continuous, but does not form a stable plume; instead, the plume moves under the influence of tides and wind. Organisms that potentially could be exposed to the discharge are those that are capable of movement and are likely to move away from the discharge if distressed by changes in salinity. Few creatures, except perhaps those living on the outfall/diffuser structure itself, are exposed to the wastewater discharge for long periods. It is more appropriate, therefore, to use one-hour averages to assess acute, short-term effects. In any case, the use of Basin Plan Water Quality Objectives in the context of this CEQA analysis is conservative in that these objectives are not meant to apply at outfalls.

However, even if 4-day averages were used to more conservatively assess effluent toxicity, all pollutants except copper, including lead and mercury, would be below the 4-day continuous concentration average. Copper, at a diluted effluent concentration of  $2.6 \mu\text{g/l}$ , would exceed the 4-day screening value of  $2.4 \mu\text{g/l}$ . The diluted effluent concentration is measured as a total value and the screening value is expressed as dissolved. Given that about 26% of copper would be in the dissolved phase, the concentration of dissolved copper would be about  $0.67 \mu\text{g/l}$ , which would be below the 4-day screening value of  $2.4 \mu\text{g/l}$ .

The comment notes that Table V.K.5 does not list data for dioxin, polychlorinated biphenyls (PCBs), or pesticides. Table V.K.5 is intended to focus on metals present in the effluent wastestream. The effluent concentrations of dioxin, PCBs, and pesticides are assumed to remain the same with the project, but the project would likely increase their pollutant loads in proportion to increases in discharge flows. As suggested by Table V.K.2 on p. V.K.35, effluent loads for these pollutants would likely increase by about 2.8%.

### *Comment*

The SEIR's statement that "[t]he effects in the near-shore are not evaluated against water quality objectives or other water quality screening criteria because CSO and stormwater discharges are short-term, seasonal, variable in duration and volume, and scattered at a number of locations along the shoreline" is inconsistent with the Basin Plan and the Clean Water Act. Vol. II at V.K.44. This statement amounts to the SEIR drafters rewriting the water quality rules in order to avoid the relevant comparisons. The notion that pollution in CSOs and stormwater should only be deemed "bad" where it exceeds acute toxicity concentrations is ridiculous, ignoring the full range of adverse effects which pollutants have on the aquatic environment. The fact that the 303(d) list of impaired waters, which compares water quality data to water quality standards and criteria, cites stormwater discharges as a consistent source of most of the stressors to the Bay debunks this self-serving equation set forth in this portion of the SEIR. Hence there is nothing "conservative" about comparing the very high concentrations of metals and other pollutants in CSOs to acute screening values, nor, for that matter, is there anything "conservative" about comparing effluent quality from the sewage plant to existing water quality criteria and objectives. Vol. II at V.K.44. In any event, even applying the numbers offered up at Table V.K.6, it is clear that the CSO discharges are in fact acutely toxic to marine organisms,

copper, silver, zinc and cyanide all falling within the acute toxicity range. Table V.K.6. Nothing in the existing Basin Plan supports the evaluation offered by the SEIR that the impact of the CSO discharges should be explained away by ignoring those portions of the metals found in particulate form, rather than dissolved form. Vol. II at V.K.46. The Basin Plan regulates total recoverable metals, including both forms. Moreover, to the extent recent criteria proposed for California by EPA do differentiate between dissolved and particulate phases, the recently issued draft Biological Opinion of the USF&WS makes it eminently clear that such proposals are scientifically flawed and legally deficient. See Biological Opinion at 183. Hence, the entire discussion of the quality of sewage overflows supports a finding of significant adverse impact.

Likewise the discussion of storm water quality is of little utility given the SEIR's truncated analysis comparing data estimates with acute toxicity criteria. Vol. II at V.K.47-48. Even with that limited review, it is clear that discharges of copper and zinc from the proposed storm water outfalls to shallow waters of Mission Creek and the Bay will in fact be lethal to certain aquatic organisms. Table V.K.7. The SEIR's discussion of dissolved forms, rejected by USF&WS and not yet (if ever) finalized by EPA, does not alter this obvious conclusion. The discussion also overlooks any discussion of discharges of dioxin, PCBs and pesticides through storm water flows. This section again can only support a finding of significant impact. . .

The assertion that copper concentrations (and indeed other parameters as well) fall within the acute toxicity range but would not be acutely toxic is this SEIR's version of double-speak, seeking to explain away every obvious concern rather than provide a specific mitigation plan to eliminate likely impacts. Vol. II at V.K.53. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

The Regional Water Quality Control Board (RWQCB) has determined that the City's combined sewer overflows (CSO), given their quality and quantity, are consistent with the Basin Plan./47/ The SEIR provides a detailed analysis of near-shore effects of existing and projected future CSOs, including the change in CSOs resulting from the proposed project. While the SEIR conservatively applies acute toxicity concentration ranges as a "yardstick," the results would not be substantially different if Basin Plan acute water quality criteria were used.

The comments assert that the acute toxicity concentration ranges shown in Tables V.K.6 and V.K.7 on pp. V.K.45 and V.K.48 are inconsistent with the Basin Plan. However, the acute toxicity concentration ranges provided in Tables V.K.6 and V.K.7 are based on toxicity data compiled by an accepted authority, the U.S. Environmental Protection Agency (U.S. EPA)./48/ The Basin Plan states that its "objectives are intended to govern the concentration of pollutant constituents in the main water mass. The same objectives cannot be applied at or immediately adjacent to submerged effluent discharge structures."/49/ Similarly, it is inappropriate to apply the objectives at or immediately adjacent to submerged or surface shallow-water discharges. However, Tables V.K.5 (p. V.K.43), V.K.6, and V.K.7 provide all the information one would need to compare existing near-shore



discharges with Basin Plan criteria. While not necessary to evaluate impacts of the project, the SEIR data in those tables have been recombined in Tables XII.11 and XII.12 for illustrative purposes.

As shown in SEIR Table V.K.6, total copper, zinc, silver, and cyanide in existing CSOs could be above acute toxicity levels. If Basin Plan criteria are used, the results are similar. Table XII.11 shows that existing CSOs could contain total copper and silver concentrations above Basin Plan screening values. Table V.K.7 indicates that total copper and zinc in stormwater could be above acute toxicity levels. If Basin Plan criteria are used for stormwater, as shown in Table XII.12, the results are similar. Stormwater could contain total copper and zinc concentrations above Basin Plan screening values. The Basin Plan screening values for acute toxicity apply to dissolved pollutants./50/ The actual concentration of the dissolved fraction of the pollutants would be substantially less than the total concentrations reported in these tables, and as stated under "Aquatic Biotic Effects" on p. V.K.53, CSO and stormwater effects would be seasonal, intermittent, and short in duration. Furthermore, CSOs would undergo considerable dilution upon entering the Bay. Therefore, the conclusions of the analysis would be the same regardless of which acute toxicity benchmarks are considered and project-related CSO increases would not result in a significant impact on near-shore waters as is also indicated by the RWQCB NPDES permit findings that the City's CSOs comply with the Basin Plan./51/

The comparisons shown in Tables V.K.6 and V.K.7 are conservative because they make no allowance for dilution. As stated under "Effects of Treated Combined Sewer Overflows" on p. V.K.44, dye studies along the Bay shoreline have indicated that CSOs receive dilution of between 1:1 and 1:300. The analysis is also conservative because comparisons are made with "low acute" values. The acute toxicity ranges provided in Table V.K.6 and V.K.7 indicate the lowest concentrations at which acute toxicity was observed in various studies; therefore, in many cases acute toxicity is not necessarily observed until pollutant concentrations are well above the lower end of the range used for analysis purposes. The actual concentration at which a species could experience toxic effects depends on the species.

As the comments note, Table V.K.6 suggests that total copper, silver, zinc, and cyanide concentrations in CSOs could fall within the range of acute toxicities. However, Table V.K.6 does not reflect adjustments to account for only the soluble, biologically available fractions, as discussed with respect to copper and zinc under "Effects of Treated Combined Sewer Overflows" on p. V.K.46. To clarify issues pertaining to silver and cyanide, the following text changes have been made, beginning with the first sentence on p. V.K.46.

**TABLE XII.11**  
**ILLUSTRATIVE COMPARISON OF POLLUTANT CONCENTRATIONS IN CSO'S WITH**  
**ACUTE WATER QUALITY SCREENING VALUES**

| <b>Pollutant</b> | <b>CSO Concentration<br/>(<math>\mu\text{g/l}</math>)/a/</b> | <b>Acute Water Quality<br/>Screening Values (<math>\mu\text{g/l}</math>)</b> |
|------------------|--|--|
| Arsenic          | 7.9  | 69 /b/   |
| Cadmium          | 2.2  | 43 /b/   |
| Chromium         | 12   | 1,100 /b/  |
| Copper           | 39   | 4.9 /b/  |
| Lead             | 61   | 140 /b/  |
| Mercury          | 0.37   | 2.1 /b/  |
| Nickel           | 21   | 74 /c/   |
| Silver           | 4.9  | 2.3 /b/  |
| Zinc             | 32.0   | 90 /c/   |
| Selenium         | 0.85   | 290 /c/  |

*Notes:*

- a. Mean concentration derived from data sources provided by Jim Salerno, Laboratory Supervisor, Southeast Water Pollution Control Plant, September 5, 1997:
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1994 - June 1995.
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1995 - June 1996.
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1996 - June 1997.
- b. San Francisco Estuary Institute, *1995 Annual Report: San Francisco Estuary Regional Monitoring Program for Trace Substances*, 1996.
- c. Corresponds to the U.S. EPA Acute Ambient Water Quality Criteria for the protection of saltwater life (40 CFR, Section 131.36).

*Source:* EIP Associates; Woodward Clyde International.



**TABLE XII.12**  
**ILLUSTRATIVE COMPARISON OF POLLUTANT CONCENTRATIONS IN STORMWATER**  
**WITH ACUTE WATER QUALITY SCREENING VALUES**

| <b>Pollutant</b> | <b>Stormwater Concentration<br/>(<math>\mu\text{g/l}</math>)/a/</b> | <b>Acute Water Quality<br/>Screening Values (<math>\mu\text{g/l}</math>)</b> |
|------------------|---|--|
| Cadmium          | 1.7   | 43 /b/   |
| Chromium         | 18  | 1,100 /b/  |
| Copper           | 35  | 4.9  |
| Lead             | 83  | 140 /b/  |
| Nickel           | 38  | 74 /c/   |
| Zinc             | 220   | 90 /c/   |

*Notes:*

- Concentration estimates derived from Bay Area Stormwater Management Agencies Association, *San Francisco Bay Area Stormwater Runoff, Pollutant Monitoring Data Analysis, 1988-1995, Final Report*, prepared by Woodward-Clyde Consultants, October 15, 1996, Table 5-2.
- California Regional Water Quality Control Board, San Francisco Bay Region, *Water Quality Control Plan* (Basin Plan), June 27, 1995, Water Quality Objectives for Toxic Pollutants, for surface waters with salinities greater than 5 parts per thousand p. 3-9, Table 3-3; 1-hour average concentrations.
- Corresponds to the U.S. EPA Acute Ambient Water Quality Criteria for the protection of saltwater life (40 CFR, Section 131.36).

*Source:* EIP Associates; Woodward Clyde International.

Table V.K.6 shows that, with the exception of copper, silver, cyanide, and zinc, the total concentrations of pollutants in treated CSOs are well below the lowest concentrations of pollutants causing acute toxicity in saltwater organisms.

Zinc concentrations in treated CSOs were estimated to exceed the lowest zinc concentration causing acute toxicity. However, acute toxicity in water from metals is due almost exclusively to metals in the dissolved form. Studies show that zinc in CSOs is present primarily in the particulate form, and that 41.5% of the total zinc in CSOs would be in the dissolved, bio-available form./68/ The zinc measured in treated CSOs represents not 320  $\mu\text{g/l}$ , but a value less than half of that, approximately 132  $\mu\text{g/l}$ . Thus, the actual concentration available to biota that are exposed to treated CSOs would be below the acute toxicity concentration range.

The total silver concentration in treated CSOs appears to be within the acute toxicity concentration range. Because the reported silver concentration is based on data near or below the analytical detection limit for silver (half the detection limit was assumed when no silver was detected), the silver data reflect substantial uncertainty. Only the dissolved

portion of the total concentration would be potentially available to biota, and studies of metals in stormwater runoff show that roughly 23% of the silver would be in the soluble, biologically available phase./68a/ Therefore, the actual concentration of silver in treated CSOs to which biota might be exposed would be about 1.1 µg/l in the dissolved phase, and the actual concentration available to biota that are exposed to treated CSOs would be below the acute toxicity concentration range.

The total copper concentration in treated CSOs is within the acute toxicity concentration range. However, only the dissolved portion of the total concentration would be potentially available to biota. Studies of metals in overflow waters show that about 26% of copper in the waste stream is in the soluble, bioavailable phase./69/ Thus, the actual concentration of copper in treated CSOs to which biota might be exposed, would be about 10 µg/l in the dissolved phase. Although this concentration exceeds the lowest acute toxicity value by a small amount, it is at the low end of the range. Furthermore, the CSOs are an existing condition; the project's effects would increase the duration of the overflow for a few minutes and increase the overflow volume by about 0.2%. The project is not expected to materially affect the concentration of copper (or any other pollutant) in treated CSOs. The project effect would not be a significant impact.

The total cyanide concentration in treated CSOs is slightly within the acute toxicity concentration range. For analysis purposes, all the cyanide is assumed to be dissolved and potentially available to biota, although this is a conservative assumption. Although the cyanide concentration exceeds the lowest acute toxicity value by a small amount, it is at the low end of the range. The project would not be expected to materially affect the concentration of cyanide in treated CSOs.

CSOs are an existing condition; the project's effects would increase the duration of the overflow for a few minutes and increase the overflow volume by about 0.2%. Treated CSOs would undergo unquantified mixing and dilution in the near-shore environment. Mobile salt-water species would quickly move away from fresh water CSOs. The data presented in Table V.K.6 suggest that organisms in the near-shore environment of San Francisco Bay could tolerate exposure to treated CSOs ~~water undiluted with Bay water,~~ and would not experience acute toxicity. The incremental change as a result of the project would be relatively small compared to existing conditions (a roughly 0.22% increase in load) and probably impossible to measure. ~~Given that treated CSOs would undergo unquantified mixing and dilution in the near-shore environment~~ For these reasons, there would be no significant impact of treated CSOs on the aquatic biota in the near-shore environment on the Bayside.

The following endnote has been added to p. V.K.69:

/68a/ Bay Area Storm Water Management Agencies Association, *San Francisco Bay Area Stormwater Runoff Monitoring Data Analysis, 1988-1995, Final Report*, prepared by Woodward-Clyde, October 15, 1996, Appendix E.



The analysis considers environmental effects of near-shore discharges in addition to acute toxicity. The SEIR considers effects on sediment quality and water-contact recreation on pp. V.K.48 and V.K.49. The SEIR does not evaluate chronic toxicity because the project's contribution to effluent, overflow, and stormwater discharges would thoroughly mix with ambient Bay waters within the time frame (i.e., several days) for considering chronic effects. Project-related loads would be small compared to existing pollutant loads flowing to the Bay, and the project would not be expected to result in any detectable changes to ambient pollutant concentrations in the Bay.

Regarding the consideration of just the soluble fraction in assessing acute effects, recently, the U.S. EPA has been determining compliance with metals effluent limits on the basis of the dissolved fractions rather than the total metals content./52/ The U.S. EPA approach is reasonable, although not all agencies agree with it./53/ Some believe it fails to account for the fact that metals associated with particulates may eventually become biologically available. However, because the SEIR conservatively compares undiluted discharge concentrations to acute toxicity levels, which relate to short-term exposures, there is no reason to presume that the particulate-associated pollutants would dissolve within the time frame to induce acute toxicity. Therefore, in the specific context of this SEIR analysis, this approach is believed to be appropriate. The Basin Plan acute toxicity criteria specifically apply to soluble pollutants, with the exception of mercury./54/

Regarding dioxins, PCBs, and pesticides, Table V.K.4 on p. V.K.39 estimates pollutant loads associated with Project Area stormwater discharges, illustrating that stormwater pollutant loads could increase from 10% to 60%, depending on the pollutant considered. While not every pollutant in stormwater could be included in Table V.K.4, by illustrating the range of possible increases, the SEIR does not ignore other pollutants. The SEIR does not challenge the assertion that urban stormwater discharges are one of the main sources of pollutants found to be impairing Bay water quality. Stormwater is discharged into the Bay untreated from hundreds of square miles of urban development in the Bay Area. The Mission Bay project is unusual in the context of the Bay Area, although not in San Francisco, in that it proposes to provide stormwater treatment by diverting "initial flows" to the City's combined sewers. (Also see the response regarding "Illustrative Mitigation Scenarios," on pp. XII.253-XII.277.)

As stated under "Standards of Significance" on p. V.K.22, "The proposed project would be considered to have a significant effect on. . .water quality if it would. . .substantially degrade water quality." This language is derived from Appendix G of the State CEQA Guidelines. The conclusion presented in the SEIR is based on a reasonable analysis of the facts related to foreseeable discharge volumes, the concentrations of pollutants in the discharges, established acute toxicity screening values, potential biological effects, likely dilution effects, and discharge frequency and duration, among other

considerations. The relatively small increment to existing CSO quantities that the project would generate is not considered sufficient to conclude that the project would substantially degrade water quality and thereby have a significant impact, based on the SEIR analysis on pp. V.K.43-V.K.46 and V.K.49-V.K.50. In summary, the project, in and of itself, would not substantially degrade water quality because 1) CSOs are an existing condition and they do not cause substantial degradation of water quality; 2) the project's effects would increase the duration of CSOs by only a few minutes and increase the volume of CSOs by about 0.2%; and 3) mixing and dilution would occur. Due to these factors, the impact on aquatic biota and water quality would be expected to be less than significant. Nevertheless, the SEIR does determine under "Conclusion" on p. V.K.54 that the project would contribute to a potentially significant cumulative impact on near-shore waters of San Francisco Bay from treated CSOs (which could increase in volume by about 11% as a result of cumulative development) and direct stormwater discharges to China Basin Channel. Mitigation Measures K.3 and K.4 on p. VI.47 address this potential cumulative impact.

#### ***Comment***

Variability of concentrations were not evaluated even though (a) dissolved concentrations for both copper and zinc are very close to acute toxicity levels (p. V.K.46), and (b) sediments in Islais Creek and China Basin Channel are candidates for designation as toxic hot spots. If the variability in concentrations and volumes were combined in the *Bayside Planning Model*, the conclusion of no significant impact from the project might be very different, especially for copper. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter]*)

#### ***Response***

Noting that project-related copper and zinc concentrations are close to acute toxicity levels and that China Basin Channel and Islais Creek are "candidate" toxic hot spots, this comment asserts that the conclusions of the SEIR could be different if the inherent variability of the discharge concentration data were to be considered to a greater extent. The SEIR reports average discharge concentrations in Tables V.K.6 and V.K.7 on pp. V.K.45 and V.K.48. These average concentrations are representative of the actual foreseeable future concentrations, which would at times be higher or lower than these levels because discharge concentrations vary naturally. Variations depend on the location of the discharge, the amount of water contained in the discharge, the particular pollutant load captured by the discharge, and many other factors. Sample analysis results also vary as a result of analytical uncertainties, which are exacerbated when concentration measurements are close to detection limits, as is often the case with stormwater measurements. The variability inherent in the concentration data presented in the SEIR would also relate to flow volumes. For more information regarding variability of flows, refer to "Variability and Uncertainty in Bayside Planning Model Results" on pp. XII.312-XII.315.



Although actual project-related discharge concentrations would peak from time to time, periods when concentrations rise above the acute toxicity concentrations listed in Tables V.K.6 and V.K.7 (conservatively considered for comparison purposes, not regulatory purposes), if any, would be seasonal, intermittent, and shorter in duration than the already relatively short duration of CSOs and stormwater discharges. For this reason, occasionally discharging concentrations higher than those reported in the SEIR would not lead to substantially different impacts than discussed in the SEIR. Concentrations lower than those reported in the SEIR would occur with roughly equivalent frequency. Furthermore, the use of conservative analytical assumptions, such as assuming no dilution of combined sewer overflow and stormwater discharges, reinforces the SEIR conclusions that the project would not cause acute toxic effects. Regarding sediment quality, the concentrations of pollutants in sediments near discharge locations reflect the deposition of particles over periods of time. Concentrations of pollutants adsorbed to or absorbed in sediment particles would not change as a result of the project, although the project could contribute to deposition of layers of sediment. The project would not change the rate that chemicals from sediment become dissolved in bay waters that is now occurring and would continue to occur. Therefore, although the project may add to the quantity of sediment, the amount of pollutants that are gradually released to the water column from the upper layers of sediment would remain the same.

### **Near-Shore Dilution**

#### ***Comment***

When a CSO occurs in Islais or Mission Creek, the entire volume of the inlet is apt to be replaced by sewage. Since these areas are poorly mixed by waters from the open Bay, these insults take a long time to dissipate. Yet the SEIR takes the tone that these are transitory events that can be accommodated. (*Bill Wilson, Environmental Planning & Design*)

#### ***Response***

Page V.K.11 of the SEIR states that tidal circulation in China Basin Channel is strong, and describes the factors that lead to that conclusion. Page V.K.12 describes Islais Creek, in which there is less tidal circulation compared to China Basin Channel. The SEIR analysis is not focused on the effects of existing combined sewer overflows (CSO) to these inlets, but the relatively small increment that the project and cumulative development would cause. CSOs are discharged according to the requirements of the NPDES permit, which were developed from extensive water quality analysis. See “Wet-Weather NPDES Permit,” pp. XII.371-XII.376, for further discussion. There is no data or evidence that demonstrates that the relatively small increases in CSO volumes projected by the SEIR analysis, in and of themselves, would cause a substantial degradation of water quality or have a substantial impact on biota, nor has any such data or evidence been presented by any SEIR comments. Nevertheless,

the SEIR conservatively concludes on p. V.K.54 that project-related increases in CSOs could contribute to a significant cumulative impact, and Mitigation Measure K.3 on p. VI.47 addresses this potential impact.

CSOs are not “sewage”, as suggested by the comment. They are comprised of 94% stormwater and 6% sanitary sewage and have received the equivalent of primary treatment. In addition, CSOs, being freshwater, are about 2.5% lighter than the ambient Bay water, and consequently, the CSOs float on the surface (upper 1 to 2 meters) as shown by 1979 CH2M-Hill dye studies./55/ Wind shear tends to drag the surface layer towards the open Bay which in turn induces a counter-flowing bottom current of new (to the inlets) Bay water. Complete flushing of China Basin Channel and Islais Creek, and/or dilution of contaminants to very low levels, occurs within one to two full tidal cycles.

Fish species in the upper waters swim to lower depths to avoid the freshwater CSO field. Studies of benthic organisms near CSO outfalls have shown that species diversity and abundance were highest at sampling stations in intermediate proximity to the CSO outfalls, indicating that bottom-dwelling species are relatively unaffected by CSOs./56/

### **Pathogenic Bacterial Contamination**

#### ***Comments***

Areas around bacteria. Residents in Bayview and other people adjacent to Candlestick are threatened constantly. From 1993 to 1997, 115 days of no swimming, 165 days of people getting sick.

Aquatic Park and Crissy Field posted 110 days with 242 days of people getting sick. And Baker Beach and Ocean Beach, 955 days with people getting sick over 855 days.

The City would attribute this to rainfall like we are having today to the combined sewage system which does not -- it's not designed to reduce these toxins that get into the fish and the bacteria that get people sick. The question is what will water quality be like in Mission Bay after the one billion gallons of wastewater is added?

And how about human health with the Mission Bay project adding 2 million gallons of partially treated combined sewage overflows a year? (*Mike Thomas, Communities for a Better Environment*)

San Francisco's Southeast Water Pollution Control Plant (WPCP), which will handle the Mission Bay development currently treat 67 million gallons per day (mgd), below its 150 mgd secondary treatment capacity. During wet weather, the plant can handle 250 mgd, treating the excess 100 mgd to primary standards. Storage and transport facilities have a capacity of 125 million gallon. Once the system reaches collection and storage capacity, combined sewage overflows occur into the Bay. The Regional Water Quality Control Board permits San Francisco to average 15 Bayside CSOs per year. Those portions of the Mission Bay which are not currently connected to the combined sewage system will be



developed to capture and discharge into the combined system, thereby increasing the incidence and/or severity of CSOs.

Beneficial use is already in peril and the predicted two million gallon annual volume of partially treated overflows (Table V.K.1) will increase bacterial contamination of the San Francisco shoreline. The beach health warning postings issued by the City because of overflows<sup>1</sup> demonstrate ongoing discharge of pathogens which negatively affect water contact recreation (e.g., swimming and sailboarding). Citywide posting against swimming total over 2,300 in number during the past six wet seasons (92/93, 93/94, 94/95, 95/96, 96/97, and 97/98).<sup>2</sup> This averages over 400 beach postings a year. Candlestick Park, a favorite for sailboards and children swimming, has been posted over 115 times since 1993.

In recent years, there have even been recurring instances of dangerous dry weather bacteria levels in swimming areas near outfalls that pose a human health threat. Human epidemiological studies (US EPA, 1983 Health Effects Criteria for Marine Recreational Water. EPA-600/1-80-031) show that a significant number of users who submerge their heads under water with enterococcus counts above 10 suffer gastroenteritis (symptoms include vomiting, diarrhea and digestive distress) in following days. The health impact on users would have put people at Candlestick State Park at risk over 280 days during 1993 and 1994.<sup>3</sup>

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<sup>1</sup> Evidence that overflows cause numerous beach postings is presented in Attachment 1

<sup>2</sup> Note that when swimming areas are posted on the same day this count includes both of them (2 days) instead of undercounting the areas posted

<sup>3</sup> See Attachment #2, SF Public Utilities Commission Bacteria Data

*(Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment)*

There are negative impacts on beneficial uses. There are frequent occurrences of bacterial contamination that prevent fishing, swimming, and surfing, which should trigger the "opener" clause for re-evaluating CSO limits. *(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter])*

There are negative impacts on beneficial uses. There are frequent occurrences of bacterial contamination that prevent fishing, swimming, and surfing, which should trigger the "opener" clause for re-evaluating CSO limits. *(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter])*

### **Response**

One comment notes that the project would contribute to foreseeable increases in combined sewer overflows (CSO) and asserts that such increases would, in turn, increase bacterial contamination along the shore of the Bay. After stating that the bacteria, and therefore wet-weather overflows, negatively affect water-contact recreation by causing beach closures, the comment discusses bacteria levels during dry weather. The comment refers to data on *Enterococcus* levels measured in 1993 and 1994, noting that they often exceeded a level where adverse human health effects (i.e., gastroenteritis) have been

observed. Another comment suggests that, because bacterial contamination affects beneficial uses (including water-contact recreation and fishing), requirements for CSOs should be re-evaluated.

As discussed under “Combined Sewer System Permits” on p. V.K.18, the City’s wastewater system is designed to achieve secondary or primary treatment of all wastewater and stormwater flows, except those that occur from large storms. The system is designed to limit CSOs pursuant to the NPDES permit which achieves adequate protection of beneficial uses. The City’s Wastewater Management system was completed March 4, 1997, after over 20 years of construction to comply with Regional Water Quality Control Board (RWQCB) cease-and-desist orders. Since then, the City has been in compliance with RWQCB orders for the first time in at least 25 years. The fully operational system is designed to greatly reduce the number of combined sewer overflows and increase the water quality in the overflows compared to pre-1997 conditions.

The SEIR acknowledges that the unmitigated project and cumulative development would increase the volume and duration of overflows, as discussed under “Volume and Quality of Treated Combined Sewer Overflows” on p. V.K.36 and under “Effects on Water-Contact Recreation” on p. V.K.54. The project would increase typical CSO volumes by about 0.22% (zero increase if Mitigation Measure K.3 is adopted). Increased CSOs could increase bacteria levels, but the relationship between CSO volumes and bacteria counts would be complex, and probably not directly proportional.

As discussed under “Water-Contact Recreation” on p. V.K.10, the San Francisco Public Utilities Commission’s Water Quality Bureau posts designated beaches (Candlestick Point Recreation Area, Aquatic Park Beach, Crissy Field Beach, Fort Point, Baker Beach, China Beach, and Ocean Beach) whenever a CSO is reported, regardless of the volume of the CSO. At the same time, water samples are collected at the shore and analyzed for total coliform bacteria. Coliform bacteria are associated with human and animal feces. The presence of coliform bacteria indicates the potential presence of pathogenic bacteria. Preliminary total coliform counts are available within 24 hours/<sup>57/</sup>; therefore, posted beaches remain posted for a minimum of 24 hours, regardless of actual bacteria counts. In practice, they are typically posted for at least about 48 hours.<sup>58/</sup> Beach postings remain until total coliform levels can be shown to be within recreational water-use standards. Because the Draft SEIR incorrectly states that coliform tests require 48 hours to complete, the following sentence has been deleted from the last paragraph on p. V.K.10:

**Because water coliform tests require 48 hours for completion, beaches remain closed for an average of three days following a CSO.**



As shown in Table XII.13 the Water Quality Bureau posted beaches on 36 days in 1997. The number of days postings occurred dropped substantially in 1997, from a 1995 high of 227 days. The drop is attributed to completing construction of new wastewater storage and transport systems on both the west and east sides of the City./59/ Because postings occur following every CSO event and last at least about two days as water samples are tested, the cumulative increases in CSO durations (between 8 minutes and 1.4 hours, depending on the outfall considered, as described under "Effects on Water Quality Recreation" on p. V.K.54) would not likely affect the number of days postings would be necessary.

**TABLE XII.13  
BEACH POSTINGS IN SAN FRANCISCO**

| <b>Year</b> | <b>Number of Days Posted</b> | <b>Fraction of Entire Year (%)</b> | <b>Annual Rainfall (inches)</b> |
|-------------|------------------------------|------------------------------------|---------------------------------|
| 1997        | 36                           | 10                                 | 20                              |
| 1996        | 173                          | 47                                 | 26                              |
| 1995        | 227                          | 62                                 | 26                              |
| 1994        | 186                          | 51                                 | 24                              |
| 1993        | 180                          | 49                                 | 22                              |

*Source:* Arleen Navarret, Senior Marine Biologist, Water Quality Bureau, San Francisco Public Utilities Commission, letter to EIP Associates, June 19, 1998.

One comment appears to be concerned with the effect of *Enterococcus* bacteria levels associated with dry-weather flows from the Southeast Water Pollution Control Plant. During dry weather, treated (disinfected) effluent is discharged to the deep waters of San Francisco Bay. Dry-weather flows would increase somewhat with the project. Table V.K.1 on p. V.K.34 shows increases in total Bayside effluent flows, which include both dry- and wet-weather flows. California does not regulate *Enterococcus* levels. The Basin Plan sets forth water quality objectives for total and fecal coliform and refers to U.S. Environmental Protection Agency criteria for *Enterococcus*./60/ The steady state criterion for *Enterococcus* is 35 counts in all areas, and the maximum criteria for designated beaches is 104 counts, for moderately used areas is 124 counts, for lightly used areas is 276 counts, and for infrequently used areas is 500 counts. The Water Quality Bureau bases beach postings on coliform bacteria levels, not *Enterococcus* levels, because California has adopted standards for coliform

bacteria, and because preliminary laboratory results for coliform bacteria are available more quickly (within 24 hours) than for *Enterococcus*. Collecting data more quickly on possible bacterial contamination allows the City to alert the public to potential problems and avoid unnecessary beach postings. The *Enterococcus* data attached by the commentor are for 1993 and 1994, and therefore are not representative of conditions since the 1997 improvements were made to the City's wastewater storage and transport systems. These improvements have decreased the volume and frequency of CSOs, and improved the quality of CSO discharges.

Beach postings are intended to protect the public from bacterial contamination. As stated above, the number of beach postings would not be likely to increase as a result of the project; therefore, the project would not substantially affect water-contact recreation (see the response regarding "Water Contact Recreation," pp. XII.354-XII.357). The Bayside wet-weather NPDES permit does provide for modifying permit conditions if the RWQCB were to find changes in the location, intensity, or importance of beneficial uses or demonstrated adverse impacts, but for the reasons stated above and in the SEIR (Section V.K, Hydrology and Water Quality: Impacts), the project would not necessitate any re-evaluation of permit requirements related to combined sewer overflows. For a discussion of the relationship between CSOs and fishing, see the response regarding "Consumption of Bay Fish," pp. XII.389-XII.392.

#### Water-Contact Recreation

##### **Comments**

Since the design objectives adopted by the CAC include a respect and enhancement of the natural environment and wildlife potential of the area, and notwithstanding the EIR statement in item V.K-10, that there is no water contact sport, there is, in fact, water contact in that area. We swim in it, and people dive in that creek. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

Notwithstanding the DEIR statement (V.K.10, V.K.50, V.K.54) there IS water contact recreation in Mission Creek and in S.F. Bay adjacent to the project area; (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

The SEIRs conclusions that water-contact recreation does not occur in either Islais or Mission Creek is not supported by any empirical evidence, including surveys. Vol. II at V.K.10. That conclusion also is inconsistent with the Regional Board's Basin Plan which lists water contact recreation as a beneficial use of Central San Francisco Bay including its tributary waters (which include both Islais and Mission Creeks). Basin Plan at 2-15; see also 2-5 ("the beneficial uses of any specifically identified water body generally apply to all its tributaries"). Indeed, it is BayKeeper's understanding that swimmers do not confine themselves exclusively to Crissy Field and Aquatic Park but do venture in the direction of downtown. Similarly, BayKeeper wonders where kayaking fits in. I can attest from personal experience that one does not stay dry when kayaking. Kayakers frequently launch from Mission Rock



and undoubtedly spend time paddling in the Mission and Islais Creek areas. Perhaps most importantly, the conclusion is circular, to the extent that few people swim in Mission and Islais Creeks because that is where the sewage overflows have been located. The conclusion of the analysis amounts to, because the City has made these areas unswimmable, the City is justified in allowing an increase in the pollution that cause them to be unswimmable in the first place. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

As stated under “San Francisco Bay Basin Water Quality Control Plan (Basin Plan)” on p. V.K.15, the Basin Plan lists water-contact recreation as a beneficial use of Central San Francisco Bay; however, water-contact recreation does not necessarily occur at every location in the Bay or to the same degree at all locations. Immediately following the Basin Plan text quoted in the comment, the Basin Plan states, “In some cases a beneficial use may not be applicable to the entire body of water, such as navigation in Calabazas Creek or shellfish harvesting in the Pacific Ocean.”/61/

The Basin Plan defines “water-contact recreation” as follows:/62/

Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and uses of natural hot springs.

The Basin Plan defines “noncontact water recreation” as follows:/63/

Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where water ingestion is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

The factor of primary importance in distinguishing water-contact recreation from noncontact water recreation is the reasonable potential for water ingestion. Kayakers may occasionally paddle in the Project Area, but although kayakers may frequently be exposed to water, they probably ingest Project Area water infrequently compared to surfers or swimmers.

While the Bay is not frequently used for water-contact recreation activities in China Basin Channel near-shore waters adjacent to the Project Area, and waters south of the Project Area including Islais Creek, individuals do use certain portions of this area for water-contact activities such as swimming, diving, and kayaking. In light of these comments, the following text has been added at the end of the first paragraph under “Water-Contact Recreation” on p. V.K.10:

**While the Project Area shore and China Basin Channel are not necessarily attractive locations for water-contact recreation due to poor access and the generally industrial nature of the area, some water-contact recreation may occur there from time to time, particularly if houseboat residents swim in the Channel. Water-contact recreation is most likely to occur during dry weather; wet-weather conditions are normally less desirable for these activities.**

To clarify the extent to which water-contact recreation occurs in the Project Area, the text of the first sentence under “Effects on Water-Contact Recreation” on p. V.K.49 has been revised as follows:

**Although water-contact recreation occurs infrequently in the Project Area, water-contact recreation on the Bayside primarily takes the form of swimming and windsurfing on the north shore (off Crissy Field and in Aquatic Park) and primarily windsurfing in on the southeast shore near the Candlestick Point State Recreation Area.**

The treatment and storage capacities of the existing combined sewer system have been designed to minimize combined sewer overflows (CSOs). The system allows a limited number of CSOs to occur, and the number of overflows at each outfall relates to such factors as how frequently these areas are used for water-contact recreation. In this way, the system has been designed to result in fewer CSOs (e.g., about one to four per year) in areas where water-contact recreation is relatively frequent (e.g., beaches) and more CSOs (e.g., about ten) in areas where relatively little water-contact recreation occurs (e.g., China Basin Channel and Islais Creek). The number of CSOs anticipated in these areas is expected to be much fewer than have occurred historically (before construction of the Master Plan facilities began, Islais Creek experienced about 47 CSOs per year) because system improvements have been completed in accordance with the Wastewater Master Plan. These improvements are expected to decrease beach closures and lead to long-term improvements to water quality, including water quality in areas where little water-contact recreation occurs.

The limited use of the Project Area for water-contact recreation would not be adversely affected by the project because this type of recreation would occur primarily during dry weather, when no combined sewer overflows or stormwater would be discharged adjacent to the Project Area. Furthermore, as explained under “Effects on Water-Contact Recreation” on pp. V.K.49-V.K.50, the durations of combined sewer overflows in the Channel would probably decrease by about 0.4 hour per year (about 2.4 minutes per event) as a result of the project. Although overflow durations at Mariposa and Islais Creek facilities would increase by up to 1.8 hours, or 11 minutes per event, these increases would not have a significant effect on water-contact recreation during the infrequent circumstances that such recreation would occur at these locations.



To correct the text on p. V.K.50, the following change has been made to the third sentence in the second paragraph on the page:

**There is no Water-contact recreation occurs infrequently at these locations on the Bayside.**

To further correct the text, the third sentence in the last paragraph on p. II.27 in Chapter II, Summary, has been revised as follows:

**There is ~~no~~ little water-contact recreation at these locations on the Bayside.**

## **Significance Finding**

### ***Comments***

Moreover, CSOs are not acceptable under any circumstances if San Francisco Bay water quality is to be protected. While the City may have permits that allow for some CSOs, there can be no doubt that all CSOs have a negative effect on water quality in the Bay. Therefore, any increase in CSOs should be considered significant. Yet the Draft EIR states that the project would have less-than-significant impacts, and that the cumulative impacts would be “potentially significant” (page V.K.54). In fact, CEQA does not allow for the identification of “potentially significant” impacts; impacts must be found to be either significant or less-than-significant prior to mitigation. In this case, the Draft EIR clearly treats this impact as significant, since it identifies it and suggests mitigation measures for it. Thus the EIR should be revised to find both project and cumulative impacts on CSOs to be significant. (*Kate White, Program Director, Urban Ecology, Inc.*)

Perhaps the greatest shortcoming in the EIR process as applied to the coming redevelopment of the Bayfront is the narrow, incremental, and piecemeal way in which it is being analyzed. The SEIR repeatedly notes that there will be only an incremental or insignificant impact on Bay water quality resulting from discharging some stormwater into the Bay and hooking up with the present system with the rest and with sanitary flows. Completely lacking is any appreciation for the present condition of the Bayfront extremely degraded. Much of this degradation is the result of the long term buildup of such ‘negligible’ or ‘incremental’ loading. (*Bill Wilson, Environmental Planning & Design*)

The SEIR’s view that expected increases, based on an average rainfall year, in sewage overflows to Mission and Islais Creeks by 2 million gallons per year, and increases in polluted rain water and increases in sewage loads to the Hunters Point plant by roughly 1 billion gallons (again, expected during an average rainfall year) do not amount to significant environmental concerns is incorrect. The SEIR’s discussion continually understates the degradation already caused by sewage overflows to Mission and Islais Creeks. . .

By way of illustration, the simple fact that the SEIR chooses to discuss the average increase of 2 million gallons predicted by the City’s model as a “0.22%” increase glosses over the true import of raw sewage discharging along San Francisco’s shoreline. . .

The SEIR's discussion of sewage overflows exemplifies BayKeeper's concerns with the SEIR. The SEIR is legally flawed because it asserts that no significant impact to either Mission or Islais Creeks will result from increases in discharges of essentially raw sewage. Describing the increase in estimated sewage overflows as a 0.22% increase in the current overflows (see Table V.K.5), omitting any discussion of the City's existing exceptions to San Francisco Bay water quality standards in Mission and Islais Creeks, or asserting that "overflows receive the equivalent of primary treatment" (Vol. II at V.K.13) do not alter the fact that the City's combined sewer system currently discharges, on average, 90 million gallons of combined sewage and rain water along the City's eastern shoreline every rainy season. The Mission Bay project, without any mitigation plan, will increase the sewage discharged at CSO outfalls by at least 2 million gallons, again on average. . . The cumulative impacts analysis on water quality only attempts to downplay the impact rather than honestly analyze the proposed increase of 98 million gallons of sewage overflows mostly to Islais Creek. . . The "standards of significance" set forth in the SEIR undermine the meaning of the term "significance." The SEIR limits significant water quality concerns to two extreme categories: "substantially degrade water quality" or "contaminate a public water supply." Vol. II at V.K.22. The SEIR goes on to say that "criteria for evaluating surface and ground water quality in the San Francisco Bay area are based on beneficial uses and water quality objectives established by the RWQCB." *Id.* . . Just a brief comment on the cumulative analysis. First, the City's contribution via the Hunters Point plant of 12% of all municipal sewage plant discharges to the Bay is an enormous contribution. 35 sewage plants currently discharge to the Bay. Evenly distributed, they would discharge about 2.9% each of the sewage going to the Bay. The Southeast Plant is the third largest sewage plant discharger to the Bay, surpassed only by San Jose and East Bay MUD. Basin Plan at 4-74. For the SEIR to attempt to downplay the cumulative impacts which the Mission Bay proposal is forecasting by stating that "the City discharges are a very small portion of the region-wide discharges to the Bay" [comment's emphasis] is irresponsible.

Indeed, the whole discussion which attempts to explain away any significance from the projected cumulative discharges because other facilities discharge large amounts of pollution as well is nonsensical. Vol. II at V.K.52. That "dilution by pollution" argument only heightens the significance of the projected increases because the Bay is under assault from all sides. The fact that numerous other problems exist does not relieve in any way the significance of what is being discussed on the east side of San Francisco. . . Lastly, the SEIR's begrudging finding of a "potentially significant impact" because of "public concern" is inconsistent with the immediately preceding description of the cumulative analyses conclusion that after build-out of the numerous large scale projects on the east side of the City, the Bayview neighborhood and Islais Creek may potentially suffer an additional 14 hours of sewage dumping into that already impaired shallow water environment. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

These comments disagree with the SEIR's conclusion that the project's projected annual average 2-million-gallon increase in combined sewer overflows (CSOs) is not a significant impact and assert that the impact of cumulative development's projected annual average 98-million-gallon increase in CSOs is downplayed.



As presented in the SEIR and cited by the comment, the existing annual average CSO volume from Bayside facilities is 910 MG/year. According to the Bayside Planning Model, the project alone would increase the volume by 2 MG/year, or 0.22%. Assuming no physical changes to the City's system, cumulative development could add about 98 MG/year of CSO volume. At Islais Creek, as noted by one comment, the annual average duration of CSO discharges would increase by about 14 hours from cumulative development. Far from downplaying the potential effects, the SEIR presents best available information about the volume and quantity of these and other projected discharges to the Bay, analyzes the effects on receiving waters and biota (pp. V.K.30-V.K.55), and concludes, based on the analysis, that neither the project nor cumulative development would have a significant impact on Bay water quality, aquatic biota, sediment quality in Islais Creek and Mission Creek, water-contact recreation and other beneficial uses. While comments disagree with these conclusions, no evidence has been presented that the incremental increases in CSOs that the project and cumulative development would generate would lead to significant impacts.

Contrary to statements made by some comments, CSOs are not raw sewage; rather, they comprise about 94% stormwater and 6% sanitary sewage. CSOs receive the equivalent of primary treatment before discharge. CSO discharges are monitored and reported to the Regional Water Quality Control Board (RWQCB). There are no discharges of raw sewage from any City outfall structure. All City discharges meet or exceed requirements of the federal Clean Water Act, Water Code, RWQCB Basin Plan, and all other applicable laws and regulations, and would continue to do so with the project and cumulative development. (See also the responses regarding "Background Regarding Existing Combined Sewer Systems" on pp. XII.232-XII.238, and "Wet-Weather NPDES Permit" on pp. XII.371-XII.376.)

Notwithstanding the technical analysis which suggests that the impacts could have been found less than significant, the SEIR conservatively found a significant cumulative impact, recognizing the high degree of concern about CSOs. As discussed on pp. V.K.54-V.K.55, the finding of significance allows for continued discussion regarding these concerns and also allows the SEIR to suggest mitigation measures (K.3 and K.4) which would eliminate CSO increases from the project and thus eliminate the project's relatively small (2%) contribution to projected cumulative increases in annual average CSO volume.

The standards of significance set forth in the SEIR (p. V.K.22) are based directly on Appendix G of the state CEQA Guidelines, which suggests examples of significant effects. The SEIR also uses beneficial use and RWQCB water quality objectives as criteria for determining significance; thus, the

impacts analysis discusses potential effects on beneficial uses and RWQCB Basin Plan Water Quality Objectives for Toxic Pollutants.

Cumulative pollutant discharge increases are not “explained away” in the SEIR solely by reference to the 12% share of total municipal dischargers to the Bay represented by the Southeast Water Pollution Control Plant. The SEIR goes on to state that all the municipal dischargers and industrial point source dischargers to the Bay, when combined, represent about 1-6% of the total load input to the Bay-Delta estuary (p. V.K.52). Other major contributors to Bay loading include agricultural runoff and mine discharges. In this context, the 3% project increase and 4-6% cumulative increase in Southeast Plant effluent discharge is small relative to all pollutant inputs to the Bay. Furthermore, the SEIR’s conclusion of non-significance from this source is also based on the lack of significant impacts caused by existing discharges from the Southeast Plant, which operates under a National Pollutant Discharge Elimination System (NPDES) permit that includes effluent pollutant concentration limits based on water quality goals as defined in the federal Clean Water Act (p. V.K.18).

Regarding the alleged exception to water quality standards pertaining to wet-weather flows, no such exception exists. The City’s wet-weather discharge permit, issued by the RWQCB, finds that the number of long-term annual average overflows permitted under the permit (10 per year in and around Mission and Islais Creeks, fewer in certain other portions of the shoreline) “will provide adequate overall protection of beneficial uses,” and that CSO discharges comply during wet weather with water quality standards./64/ The comment may be referring to an exception to discharge prohibitions against discharge of waste to dead-end sloughs and where initial dilution is less than 10:1. As part of the current wet-weather discharge permit, the RWQCB reaffirmed a prior conclusion that this exception is consistent with the Basin Plan, which was adopted to protect Bay water quality./65/ Thus, the exception is to a particular discharge prohibition and not to any water quality standards.

Regarding the term “potentially significant” as used under “Conclusion” on p. V.K.54, some impacts are “potentially significant” in that, if the project is implemented, the impact may or may not occur, or the impact may or may not be significant. “Significant impacts” and “potentially significant impacts” are all addressed in the same manner under CEQA. All are treated as significant adverse environmental impacts that would or could occur if the project were approved and implemented. Appropriate mitigation measures or alternatives for the project are identified to the extent feasible, as listed in Chapter VI, Mitigation Measures, and Chapter VIII, Alternatives. Regarding the need to prepare a more detailed mitigation plan, refer to the response in Mitigation Measures regarding “Delay in Specification of Mitigation Measures” pp. XII.458-XII.460. Regarding a combined mitigation strategy, refer to the response regarding “Illustrative Mitigation Scenarios” on pp. XII.253-



XII.277. Regarding alternative stormwater treatment technologies, refer to the response regarding “Alternative Stormwater Management Technologies” on pp. XII.245-XII.249.

### **Water Discharges from Research and Development Activities**

#### ***Comments***

One of the things that I noted was that UCSF has identified hundreds of biohazards and other biotechnology byproducts that may be discharged into the sewer systems. And the system right now is not designed to handle these discharges. We need to look into ways to handle these before they go into the wastewater sewage system and before they go into Bayview/Hunters Point. *(Kim Rogers)*

Furthermore, in order to protect worker exposure the UCSF biotechnology industry needs to incorporate a stringent source reduction plan which ensures waste will not enter the sewage system nor get into the aquatic food chain. *(Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment)*

Environmental Setting and Impacts: Hydrology and Water Quality: The report acknowledges that “. . .UCSF and Commercial Industrial operations may involve the discharge of some pollutants not typically associated with most other San Francisco discharges, which if improperly handled, could discharge chemicals, radioactive materials, and biohazardous materials. . .” (p.V.K.23). This is an obvious understatement; genetic engineering R&D and potential full-scale production of bio-engineered products is *almost certain* to generate wastewater with such constituents. Their potential environmental, health, and safety impact must be evaluated in the report in detail. A commitment to develop local wastewater pre-treatment ordinances to ensure removal of all biohazards, including genetically engineered products, must be proposed as a mitigation measure (beyond the solid waste measure I.1 on p. VI.40). *(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer’s letter])*

These enteric pathogenic impacts could be overshadowed by the possibility of releases of level four and five bioengineered organisms into an overflowing medieval sewer system which will overflow into the bay. More than casual conditioning of this type of industry must be instituted at the project planning level. Even Activated sludge with tertiary filtration is not capable of offering safe handling of any of this kind of wastewater. . .Environmental Setting and Impacts: Hydrology and Water Quality: The report acknowledges that “. . .UCSF and Commercial Industrial operations may involve the discharge of some pollutants not typically associated with most other San Francisco discharges like level 4 biological agents, which if improperly handled, could discharge chemicals, radioactive materials, and biohazardous materials. . .” (p. V.K.23). This is an obvious understatement; genetic engineering R&D and potential full-scale production of bio-engineered products is almost certain to generate wastewater with such constituents. Their potential environmental, health, and safety impact must be evaluated in the report in detail. A commitment to develop local wastewater pre-treatment ordinances to ensure removal of all biohazards, including genetically engineered products, must be proposed as a mitigation measure (beyond the solid waste measure I.1 on p. VI.40). *(Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer’s letter])*

The Mission Bay project is expected to accommodate significant biotechnological and research & development uses, which are known to generate large amounts of wastewater, often with higher-than-average levels of contamination and types of pollutants that differ from those in the normal waste stream. Yet the Draft EIR fails to analyze these potential impacts. The Draft EIR should document the expected flows and pollutant loads from the expected uses, and it should then identify appropriate impacts and mitigation measures in relationship to these uses. This additional analysis of water quality and treatment impacts associated with these uses must be recirculated for public review. . . Second, all biotechnological and research & development functions to be included in Mission Bay should be required to include their own primary treatment facilities that will result in discharges to the sanitary sewer system. . . with water quality levels equivalent to that of domestic wastewater. This will ensure that the wastewater impacts of biotech and R&D uses will be the same as those. . . uses. (*Kate White, Program Director, Urban Ecology, Inc.*)

The SEIR downplays the threats posed by wastewater discharges from UCSF labs and biotechnology firms to the sewage system. The pretreatment program should institute a flat prohibition on discharges from such facilities by keeping those facilities' labs and areas where chemicals, radioactive materials and biohazardous materials are used entirely separate from the sewage system. . .

The need to keep such facilities "off-line" is evident from the SEIR's juggling of this concern. The SEIR's discussion of industrial pollutants that are expected to be discharged to the Hunters Point plant from new facilities in Mission Bay is internally inconsistent. The discussion concludes that "pollutants in wastewater from the Project Area are unlikely to differ substantially from other City wastewater." Vol.II at V.K.23. This conclusion follows a discussion which notes that "UCSF and Commercial Industrial operations may involve the discharge of some pollutants not typically associated with most other San Francisco discharges. . ." *Id.* In particular, radioactive materials and biohazardous materials are mentioned. Moreover, the discussion focusses on the likelihood that "occasional" discharges of these materials "could go undetected," apparently because any one discharge would not cause the sewage plant itself to show a violation. Nevertheless, the plant is not designed to treat radioactive and biohazardous materials and such discharges will end up in the Bay, or, during large rain events, could end up in Mission and Islais Creeks. In short, the discussion suggests that the City's pretreatment program, in most cases, may not address these discharges unless they were very large. Each such facility should have its own self-contained waste disposal (or perhaps recycling) process. Simply because discharges of these materials are not visible as violations at the plant does not lead to a conclusion that those discharges are just like everyone else's. They should be kept out of the waste stream. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

Ms. Jackson just spoke about UCSF's biohazards and the possibility that there are biohazards going southeast, and that's definitely unacceptable. (*Alex Lantsberg*)

### ***Response***

These comments assert that the SEIR is internally inconsistent and that it downplays the threats of wastewater discharges by UCSF and Commercial Industrial facilities. Particular comments refer to biohazardous materials that could be discharged with wastewater. Various comments suggest the need to prohibit chemical, radioactive, and biohazardous discharges from UCSF and Commercial Industrial



facilities, and to separate areas that handle these types of materials from the rest of the sewage system. Some comments express concern that occasional discharges could go undetected and that the existing wastewater treatment system is not designed to handle radioactive and biohazardous wastes. Specific comments voice concern that chemical, radioactive, and biohazardous wastes could be discharged to China Basin Channel and Islais Creek, particularly during large storms. One comment expresses concern that these materials could be released into the Bayview-Hunters Point area.

According to several comments, the SEIR fails to evaluate the potential water quality impacts of biotechnology and research and development discharges. These comments call on the City to estimate expected flows and pollutant loads, and to recirculate the SEIR for public review after additional water quality and health and safety evaluations take place. One comment urges source reduction as a means of protecting worker exposure and minimizing wastewater discharges.

On pp. V.K.30-V.K.40, the SEIR estimates project-related wastewater and stormwater flows and pollutant loads to the extent that information is available. Under “Quality of Municipal Wastewater from the Project” on p. V.K.23, it discloses that discharges from some UCSF and Commercial Industrial facilities could include some types of pollutants not typically associated with most other San Francisco discharges. The SEIR is not inconsistent, however, when it also assumes on pp. V.K.33-V.K.36 that the overall concentrations of pollutants in Project Area wastewater would not be substantially different from the concentrations that already exist elsewhere in San Francisco. In part, this is due to the relatively large wastewater flows already discharged by San Francisco. The project would result in an increased wastewater flow of roughly 3%, as indicated under “Volume and Quality of Municipal Wastewater Effluent” on p. V.K.33. Because flows from project-related research and development operations would be relatively small compared to existing and foreseeable future flows from all of San Francisco, research and development laboratories would have little effect on typical pollutant concentrations within the wastewater treatment system. Furthermore, sewer discharges similar to those anticipated from the Project Area already occur in San Francisco from existing sources, such as at UCSF’s existing campus sites. The text on p. V.K.23 is intended to disclose the potential effects of the project, not to downplay them. The issue of hazardous materials releases to the sewer system is further discussed in Table V.I.8 on p. V.I.28 and Appendix H, Health and Safety, on p. H.30.

As discussed on p. V.K.21, the discharge of chemical, radioactive, and biohazardous wastes into the City’s sewer system is generally prohibited, except where discharges are specifically allowed by an industrial waste discharger permit in accordance with the City’s Industrial Waste Ordinance. The Industrial Waste Ordinance does not allow such discharges in cases where they could interfere with,

obstruct, or damage the sewer system; cause a nuisance; interfere with system repair or maintenance; or cause violations of the City's National Pollutant Discharge Elimination System (NPDES) permits./66/ Specific prohibitions relate to materials capable of obstructing sewer flows; flammable or explosive substances; garbage; toxic, hazardous, noxious, and malodorous substances; and bioaccumulative toxic substances. In cases where discharges comply with pretreatment program requirements, they may be permitted. In this way, minimal quantities of certain chemicals or radioactive materials (e.g., tritium) may be discharged to the sewer. Chemical wastes that are regulated as hazardous wastes may not legally be discharged to the sewer system under any circumstances. Hazardous wastes are to be treated on site or hauled off site in accordance with hazardous waste regulations, as described in Table V.I.2 on p. V.I.5 and Appendix H, Health and Safety, under "Hazardous Waste Management" on pp. H.15-H.16. As discussed under "Hazardous Waste Disposal" on p. V.I.40, hazardous waste source reduction is addressed by existing programs and regulations. In addition to minimizing the generation of hazardous wastes, effective source reduction strategies can reduce worker safety risks and potential sewer discharges.

As discussed under "Larger Waste Generators" (pp. V.I.33-V.I.35), most radioactive waste generated by Commercial Industrial facilities would be stored on site for decay or sent to a radioactive waste landfill. A relatively small portion could be discharged to the sewer system if permitted by the California Department of Health Services Radiologic Health Branch and the San Francisco Public Utilities Commission (SFPUC) Bureau of Environmental Regulation and Management. San Francisco prohibits discharges of radioactive waste unless (1) the discharger obtains a permit for the discharge from the General Manager of the SFPUC, (2) the discharger obtains a license for the discharge from the Radiologic Health Branch of the California Department of Health Services, and (3) the discharge conforms to the California Radiation Control Law and its implementing regulations found in Title 17 of the California Code of Regulations./67/ These regulations prohibit discharges of radioactive wastes to uncontrolled areas (e.g., the sewer) in excess of specific levels identified for each radionuclide. These levels are set so as to ensure that the relatively low levels of radioactive waste discharged to the sewer system would not substantially affect background levels of radiation that occur naturally in the environment. As a matter of policy, UCSF does not discharge radioactive waste from its research operations to the sewer./68/

The biohazardous materials listed in Table H.2 of Appendix H (pp. H.6-H.11) would not be allowed to be discharged to the sanitary sewer. Table H.2 lists representative examples of the types of infectious agents that could be handled by UCSF and Commercial Industrial facilities in the Project Area, but not all of these organisms would be used. Contrary to one comment, Mitigation Measure I.3 on p. VI.40 would prohibit the handling of Risk Group 4 biohazardous materials (those that would



require Biosafety Level 4 containment) in the Project Area. Moreover, the application of standard microbiological practices, which are industry standards, would preclude any discharge of biohazardous materials to the sewer system (see SEIR Appendix H, Health and Safety, "Standard Industry Practices," pp. H.18-H.21). Mitigation Measure I.1 on p. V.I.40 would ensure that Commercial Industrial operations comply with the guidance found in *Biosafety in Microbiological and Biomedical Laboratories* and *Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)*, or their successor documents./69/ As explained under "Enforcement of Guidelines for Work Involving Biohazardous Materials and Animals on p. V.I.27, UCSF complies with these guidelines as a matter of institutional policy and as a condition of receiving federal funding for its research. According to these documents, standard microbiological practices require the following:/70/

All cultures, stocks, and other regulated wastes are decontaminated before disposal by an approved decontamination method, such as autoclaving. Materials to be decontaminated outside of the immediate laboratory are to be placed in a durable, leakproof container and closed for transport from the laboratory. Materials to be decontaminated at off-site from the laboratory are packaged in accordance with applicable local, state, and federal regulations, before removal from the facility.

This requirement applies to all activities involving infectious agents, including those that require only Biosafety Level 1 containment, which are not considered biohazardous for purposes of this SEIR./71/ Work involving biohazardous materials (those that require at least Biosafety Level 2 containment) requires the following additional practices and facilities:/72/

Cultures, tissues, or specimens of body fluids are placed in a container that prevents leakage during collection, handling, processing, storage, transport, or shipping.

Laboratory equipment and work surfaces should be decontaminated with an appropriate disinfectant on a routine basis, after work with infectious materials is finished, and especially after overt spills, splashes, or other contamination by infectious materials. . . .

A method for decontamination of infectious or regulated laboratory wastes is available (e.g., autoclave, chemical disinfection, incinerator, or other approved decontamination system).

Whenever activities require Biosafety Level 3 containment, the following additional practices are required, and in-lab decontamination facilities are recommended:/73/

All potentially contaminated waste materials (e.g., gloves, lab coats, etc.) from laboratories or animal rooms are decontaminated before disposal or reuse.

Spills of infectious materials are decontaminated, contained and cleaned up by appropriate professional staff, or others properly trained and equipped to work with concentrated infectious material.

In light of these standard industry practices, the potential for project-related use of biohazardous materials to result in substantial wastewater discharges of infectious or genetically altered organisms appears remote. As a matter of policy, UCSF does not dispose of any hazardous chemical, radioactive, or biological waste to the sewer, even if permitted to do so by law. On a regular basis, UCSF collects laboratory wastes segregated by waste type and does not charge laboratory occupants for this service. Researchers can schedule additional waste pick-ups by request. By providing convenient waste disposal services at no charge, UCSF eliminates possible incentives for inappropriate hazardous waste disposal./74/ For these reasons, the biohazardous materials handled in the Project Area would not be expected to affect residents of the Bayview/Hunters Point area (see the response regarding “Environmental Justice” on pp. XII.378-XII.392, and Appendix H, Health and Safety, “Larger Community Exposure [Off-Site Environment Within and Outside the Project Area],” pp. H.27-H.32).

Although routine discharges of chemicals, radioactive materials, and biohazardous materials would be prohibited, except where specifically allowed by permit, the SEIR acknowledges the potential for occasional accidental or unintentional discharges of hazardous substances to the sewer, as discussed under “Quality of Municipal Wastewater from the Project” on p. V.K.23 and under “Waste Disposal” in Appendix H (p. H.30). The effects of a singular discharge would probably not be detectible (i.e., no demonstrable environmental effect would occur). Some chemicals would decompose or would be removed by treatment processes. Similarly, some radionuclides would adsorb onto sewage sludge removed from the treated effluent. Most infectious agents would be rendered inactive outside the laboratory in the “wild” environment of the sewer system and by the disinfection portion of the treatment process. In all cases, substantial dilution would occur throughout the wastewater collection and treatment system. The SEIR acknowledges the need for facilities constructed in the Project Area to be designed to facilitate the rapid discovery and identification of any inappropriate discharges. Mitigation Measure K.2 on pp. VI.46-VI.47 addresses this issue by requiring wastewater sampling ports in any building anticipated to have a potentially significant discharge of pollutants to the sanitary sewer. By facilitating the tracking of inappropriate discharges at their sources (before substantial dilution has occurred), this measure would minimize the potential for such discharges to recur, thereby avoiding a potentially significant impact.

No available evidence suggests that the occasional accidental or unintentional discharge of hazardous chemical, radioactive, or biohazardous materials to the sewer system would substantially harm water



quality, including water quality in China Basin Channel and Islais Creek during and after large storms. Large storms would provide maximal dilution of pollutants. Given San Francisco's size and the diversity of its existing dischargers, such occasional discharges probably occur now without incident. The SEIR discusses the foreseeable effects of combined sewer overflows on pp. V.K.36-V.K.37 and V.K.43-V.K.46. and finds these effects less than significant. On the basis of the above discussion, the separation of UCSF and Commercial Industrial wastewater flows (particularly those from research and development activities) from the rest of the sewage treatment system would be unwarranted.

The SEIR fully and adequately evaluates the water quality and health and safety effects of potential discharges from foreseeable research and development operations within sections V.I. Health and Safety and V.K. Hydrology and Water Quality. Therefore, no further analysis is necessary and no recirculation for public review is required.

#### **Pollutant Loads and Federal and State Antidegradation Policy**

##### ***Comments***

How does the Project comport with the anti-degradation section of the Clean Water Act? How will the Project comply if Mission Creek is designated a Total Mass Daily Loadings (TMDL) site? (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

These comments are directed at the DEIR regarding how the existing project alternatives and the impact of combined sewage overflows (CSOs) endanger beneficial use. . . San Francisco's combined sewer system collects, treats and disposes of its municipal wastewater and urban stormwater. The existing combined system volume in both wet and dry season is already challenging the goals of the RWQCB to protect beneficial use for water contact and non-water contact recreation, ocean, commercial, sport fishing, marine habitat, wildlife habitat and increasing wastewater flows at the rates predicted in the DEIR will only further endanger public health and the regulatory goals for San Francisco. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

Toxic concentrations are assumed not to change in the wastewater (p. V.K.33-36). The need to *reduce toxic loads* has been ignored (p. V.K.41), even though the SF Bay RWQCB has recognized the need for reductions in selenium, mercury, copper, diazinon, and PCB's (p. V.K.16). Although the City's wastewater permits do not yet include Total Maximum Daily Limits (TMDL's), copper will be inevitably targeted, just as it already has been for all other Bay Area POTW's. Merely asserting that ". . . The City would have to comply with any changes to its permit that might result from RWQCB action" (p. V.K.17) ignores obvious impacts, both environmental and economic. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter]*)

Although the SEIR notes that the Central Bay has been determined by the Regional Water Quality Control Board to be impaired by copper, mercury, diazinon (a common pesticide), PCBs and selenium, no serious discussion is provided as to whether the anticipated increases in CSO discharges should be allowed to further contribute to those impairments. Vol. II at V.K.8. Such increases will increase the mass of those contaminants in the Bay and will violate the Clean Water Act's and State Water Resources Control Board's antidegradation policies. . .

As regards Table V.K.2, BayKeeper simply notes that proposing a project that will contribute an additional 100 lbs per year of copper, 10 lbs per year of selenium, 1 lb per year of mercury through the sewage plants' effluent, given the fact that the Central Bay already is impaired with each of those toxic pollutants, is inconsistent with the Clean Water Act's antidegradation policy and obviates the significance of the Mission Bay project's impact on effluent discharges. Although 100 lbs, 10 lbs, and 1 lb do not sound like very large numbers, when one considers that the criteria recently proposed by the USF&WS for selenium and mercury are 2 ug/1 (parts per billion) and 2 ng/1 (parts per trillion), respectively, and the existing criteria established by the Regional Board for copper is 4.9 ug/1, when one is discussing pounds even in a waterbody as extensive as the Bay, one is talking very large amounts of these very toxic substances. See USF&WS, Draft Biological Opinion re: USEPA California Toxics Rule (April 10, 1998); Regional Board Basin Plan at Table 3.3. Table V.K.2 relating to mass pollution from the sewage plant, supports a finding of a significant impact on water quality from the Mission Bay project standing alone. . .

Indeed, given that it is evident that the new storm water system proposed for the Mission Bay project will contribute pollutants that are currently impairing the Bay, including at a minimum copper, PCBs and pesticides, it appears arguable that such a new source cannot legally be issued a permit. Section 122.4 of Title 40 of the Code of Federal Regulations states that "No permit may be issued. . . (I) To a new source. . . If the discharge from its construction or operation will cause or contribute to the violation of water quality standards." The only exception to that flat prohibition would be by reference to a completed load allocation which was not entirely used up and specific compliance measures already in place for all other sources. 40 C.F.R. § 122.4(I). See also 40 C.F.R. § 122.2 (definition of "new source"). Thus, the SEIR's assertion that a municipal storm water permit will be forthcoming covering the proposed new outfalls or even the existing may not be correct. See Vol. II at V.K.17. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### *Response*

California has adopted an antidegradation policy that incorporates the federal requirements in Title 40 of the *Code of Federal Regulations* (Section 131.12). The policy applies to State Water Resources Control Board and Regional Water Quality Control Board (RWQCB) decisions that affect water quality. The antidegradation policy applies where water quality standards are not specific enough for a particular water body or where water quality standards do not address a particular pollutant./75/ The policy also provides guidance for setting standards and for other regulatory decisions, to determine when additional control measures should be required to maintain beneficial uses and high quality waters.



The state and regional boards have followed the antidegradation policy in establishing the water quality objectives of their water quality control plans. The policy is also applicable to individual permitting decisions, including issuance of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permits. For example, waste discharge requirements for new discharges or for the substantial expansion of existing discharges ordinarily require preparation of an analysis applying the policy.<sup>76/</sup> However, if the issues have already been studied as part of a water quality control plan amendment, a new analysis is not required to issue waste discharge requirements.

The project would not involve any new or substantially expanded existing discharges. Effluent discharges currently exist, and the project-related 2.8% increase in effluent flows would not be considered a substantial expansion of this existing source. Similarly, combined sewer overflows (CSO) currently occur from time to time, and the project-related 0.22% increase in CSO volumes would not be considered a substantial expansion of this existing source. Stormwater is currently discharged directly from the Project Area, and although project-related stormwater would be discharged from different locations (still within the Project Area), the project-related 1.9% increase in stormwater discharges would not be considered a substantial expansion of this existing discharge. The City will comply with Phase II stormwater regulations when the U.S. Environmental Protection Agency adopts them (draft regulations have been published).<sup>77/</sup> The antidegradation policy will be considered during the stormwater permit process, if necessary.

The SEIR estimates project-related changes in wastewater and stormwater flows and pollutant loads in Tables V.K.1-V.K.4 on pp. V.K.34-V.K.39. The SEIR describes San Francisco's NPDES permits under "Combined Sewer System Permits" on p. V.K.18. These permits cover discharges from the Southeast Water Pollution Control Plant and CSOs. Contrary to the comments, these permits explicitly find that the City's wastewater system protects all beneficial uses. As these permits are renewed every five years, the RWQCB ensures consistency between the permitted discharges and the antidegradation policy. As discussed under "Deep Water Effects of Increased Treated Effluent" on p. V.K.41, San Francisco currently complies with its NPDES permits (e.g., maximum flows and discharge concentrations) and would continue to comply with its permit requirements if the project were approved. See also the response regarding "Wet-Weather NPDES Permit," pp. XII.371-XII.376.

Because relatively small loads (e.g., on the order of a few pounds) can sometimes affect water quality, the SEIR does not rely on any arbitrary significance threshold based on loads. Instead, it compares pollutant concentrations estimated for project-related discharges with concentration-based acute toxicity criteria. As discussed under "Effects on Receiving Waters" on pp. V.K.40-V.K.50, the

project would not, by itself, substantially affect water quality in San Francisco Bay. However, based on the high degree of public concern about CSOs; the lack of conclusive evidence refuting a causal relationship between CSOs, stormwater discharges, and sediment quality; and the recognition that the existing setting may be degraded, the SEIR conservatively finds a potentially significant cumulative impact from CSOs and untreated stormwater discharges. The nature of the setting's impairment is described under "Impairment of Central San Francisco Bay" on p. V.K.8 as it relates to mercury, copper, selenium, diazinon, and polychlorinated biphenyls (PCBs).

Contrary to one comment, no total mass daily loads (TMDL) have been established for any pollutant, and the RWQCB has not placed TMDLs on any Bay Area Publicly Owned Treatment Works (POTW). At this time, there is insufficient information to meaningfully evaluate how TMDL processes would relate to the project. What is known is that the TMDL process for mercury is expected to begin in 1998 and last until 2003.<sup>/78/</sup> The TMDL processes are scheduled to start in 2000 for diazinon, in 2003 for copper and PCBs, and in 2006 for selenium. Because the main sources of mercury in the Bay are erosion and drainage from abandoned gold and mercury mines (see p. V.K.8), the TMDL process for mercury may or may not have substantial consequences for San Francisco's discharge requirements. Similarly, the relationship between the TMDL processes for diazinon, copper, PCBs, and selenium may or may not substantially affect the City. The RWQCB must complete additional studies before a more detailed evaluation can occur. The project's (about 2.8%) and cumulative projects' (4.3%) contribution to the Southeast Plant pollutant load would not appreciably affect the City's ability to comply with whatever TMDL requirements may be promulgated. For example, if TMDL requirements are promulgated at levels that necessitate a reduction in the City's load, whatever action the City might perform to meet those requirements would need to be performed throughout the Bayside, and would not be limited to just the project areas.

The schedules above assume that individual TMDL development cycles will take five years to complete. The Regional Water Quality Control Board admits that, in many cases, this may be a gross underestimate. Schedules for TMDL development after the first two years should be regarded as very tentative.<sup>/79/</sup> Completion will depend on the availability of funding and staff, watershed stakeholder group priorities, and further evaluations of the need for and feasibility of the TMDLs.



## Wet-Weather NPDES Permit

### Comments

Exemptions from the California coastal water quality limits and the RWQCB's shallow water limits, defining the North Point Wastewater Treatment Plant as a discharge point rather than a POTW, all exempt the City's combined system from performance standards and discharge limits. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

The *Bayside Cumulative Impacts Analysis Draft Report* claims no need to evaluate compliance with CSO limits, even with the very permissive "long term" averages. More importantly, the report claims no need to evaluate CSO impacts on beneficial uses, because the NPDES permit does not require it. Besides being a possible violation of the CEQA/NEPA process, the CSO exemptions in the NPDES permits are based on several assumptions that are incorrect:

- Construction of the CSO containment system is *not* complete. First of all, the original Master Plan project was never completed as proposed (e.g. the Cross Town tunnel). . . .

This means that direct evaluation of water quality impacts is needed, not simply certification that the CSO containment system is adequately constructed and operated. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter]*)

The Bayside Cumulative Impacts Analysis Draft Report claims no need to evaluate compliance with CSO limits. . . [A]nd the report claims no need to evaluate CSO impacts on beneficial uses, because the NPDES permit does not require this. This asks the regulatory board to design your project and stifles any creative solutions to the problems. Besides being a possible violation of the CEQA/NEPA process, the CSO exemptions in the NPDES permits are based on several assumptions that are incorrect:

- Construction of the CSO containment system is not complete. First of all, the original Master Plan was never completed as proposed (e.g. the Cross Town tunnel). There are alternatives to this plan which are far less expensive and create great benefits for San Francisco and the State of California. . . This will continue and could be construed to be a deliberate preconditioning justification for the very expensive and unnecessary cross town tunnel. It is almost an attempt to piece meal that project by exacerbating the problem which the tunnel will be invented to fix. . .

This means that direct evaluation of water quality impacts is needed, not simply certification that the CSO containment system is adequately constructed and operated. (*Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter]*)

Additionally, the Draft EIR does not discuss project and cumulative CSOs impacts in a format consistent with the Combined Sewer Overflow (CSO) Policy (50 FR 18688). Although the Draft EIR (page V.K.18) alludes to the requirements of the Federal Combined Sewer Overflow Control Policy, the impacts section does not discuss the project's consistency or means of achieving the nine

minimum levels of CSO controls. Page V.K.36 simply states that the increases in the CSO volumes would not constitute a violation of the City's NPDES permit, result in a violation of water quality objectives, substantially degrade water quality, or substantially affect aquatic organisms. The impacts section does not mention the Federal Combined Sewer Overflow Control Policy and its associated measures. (*Kate White, Program Director, Urban Ecology, Inc.*)

### *Response*

These comments take issue with the City's compliance with its National Pollutant Discharge Elimination System (NPDES) permit with regard to combined sewer overflows (CSO). Comments assert that data are not available to determine whether the City actually complies with CSO requirements because the San Francisco Wastewater Master Plan improvements assumed by the NPDES permit have only recently been completed. Additional comments question whether the sewer system is complete because a cross-town tunnel has not been constructed. One comment states that exemptions from the RWQCB's shallow water limits exempt the City from water quality standards. Another comment states that the impact analysis is not consistent with the Federal Combined Sewer Overflow Control Policy.

The SEIR has thoroughly analyzed the impacts of the project, significant impacts have been identified and disclosed to the public, and mitigation measures have been developed to reduce the impacts to a less-than-significant level. Many of the comments relate to the City's wastewater system and its NPDES permits, and not project impacts. The comments misunderstand or misinterpret the regulatory findings and assumptions under which the City's system operates, as explained below.

Any exemptions from shallow water limits for CSO discharges were duly adopted by the Regional Water Quality Control Board (RWQCB), with U.S. Environmental Protection Agency (U.S. EPA) concurrence, based on water quality impact assessments conducted pursuant to federal regulations and Basin Plan requirements and procedures that provided a basis for the agencies to find that no inappropriate degradation of water quality would occur. The Bayside wet-weather NPDES permit states the following with regard to this matter:/80/

In Order No. 84-28 the Board concluded that the exception to discharge prohibitions against discharge of waste to dead-end sloughs and where initial dilution is less than 10:1 *are consistent with the Basin Plan* [emphasis added]. A report submitted by the discharger to the Board in March 1980 concluded that an inordinate financial burden would be placed upon the discharger relative to the increased protection of beneficial uses that would be gained by requiring a minimum initial 10:1 dilution of wastes.

Impacts of project-related CSOs on water-contact recreation, a beneficial use, are described on pp. V.K.49-V.K.50 and V.K.54. With regard to impacts of CSOs in general on beneficial uses, such



impacts were exhaustively studied during the NPDES permit issuance process. Page V.K.18 discusses the rationale behind the long-term average annual overflows allowed by the NPDES permit; the following is language from the Bayside wet-weather NPDES permit/81/:

In 1979 the Board issued Order No. 79-67 for the wet-weather facilities. Based on the Regional Board's staff findings and evidence presented at the public meeting concerning the cost differences of facilities necessary to achieve specific overflow frequencies and the water quality benefits derived from construction of those facilities and considering the location and intensity of existing beneficial uses; a long term average of 4 overflows per year for diversion structures No. 9 through 17, a long term average of 10 overflows per year for diversion structures No. 18 through 35 and an average of 1 overflow per year for diversion structures No. 36 through 43 *will provide adequate overall protection of beneficial uses* [emphasis added].

Based on the above permit findings, the SEIR states that the City's system operates in compliance with all applicable water quality standards. As an EIR on a development project and not the City's wastewater management system, there is no need for this SEIR to re-evaluate impacts of existing CSOs. The comments present no evidence of water quality or beneficial use impacts from either CSOs or the project that would warrant such an analysis.

The Wastewater Master Plan contains a series of inter-related projects designed to ensure San Francisco's compliance with the Clean Water Act and foreseeable regulatory agency standards for dry- and wet-weather effluent discharges. The system was designed to reduce the discharge of untreated sewage to the ocean and Bay. The purposes of the Wastewater Master Plan were to:

- Increase and upgrade the City's dry-weather treatment capacity to accomplish secondary treatment;
- Provide storage for wet-weather flows that exceed the system's treatment capacity during storms; and
- Use an automatic control system to maximize use of the system's storage, transport, and treatment facilities.

To achieve the goals of the Wastewater Master Plan, 19 major projects were constructed between 1977 and 1997. Of these projects, those on the Bayside included:

- North Shore Outfalls Consolidation
- North Shore Pump Station
- North Point Treatment Plant
- Channel Outfalls Consolidation
- Channel Pump Station
- Mariposa Facilities

- Islais Creek Transport/Storage
- Flynn Pump Station
- Southeast Treatment Plant (modernization)
- Hunters Point Facilities
- Griffith Pump Station
- Yosemite Facilities
- Sunnydale Pump Station
- Sunnydale Facilities

All of the CSO facilities proposed by the Wastewater Master Plan were completed as of March 4, 1997, and are fully operational.

A crosstown tunnel was included in the Wastewater Master Plan to transport combined sewage from the Bayside to the Oceanside treatment plant for treatment and discharge. The existing combined sewer system is in full compliance with all requirements, and the RWQCB does not currently require the City to construct a crosstown tunnel to meet water quality requirements. Therefore, no current plans exist to finance it or schedule its construction. See also the responses regarding "Background Regarding Existing Combined Sewer System" pp. XII.232-XII.238, and "Cross-Town Tunnel," pp. XII.277-XII.278.

The North Point Water Pollution Control Plant is not a publicly owned treatment works as defined by Title 40 of the *Code of Federal Regulations*, Section 122.2, and as supported by subsequent case law (Montgomery Environmental Coalition vs. Costle, 646 F.2d568 [D.C. Cir. 1980]). The Bayside wet-weather facilities NPDES permit does, however, specify discharge prohibitions and effluent limitations for the North Point Plant in accordance with the technology-based limitations applicable to non-POTWs under the federal Clean Water Act. The permit is designed to protect beneficial uses in accordance with the Basin Plan. The long-term design criteria for CSOs must be complied with, but are not intended to be used to determine operational compliance, which is measured by conformance with the operations plan.<sup>/82/</sup> Therefore, sufficient information is available to assess permit compliance. Additional data regarding the effectiveness of the newly completed Bayside facilities in meeting the CSO design criteria are not necessary to evaluate permit compliance.

The U.S. EPA adopted its Combined Sewer Overflow Control Policy in 1994.<sup>/83/</sup> This policy establishes a consistent national approach for controlling discharges from CSOs to the nation's waters and consists of a two-phase process. During Phase I, NPDES permittees are required to implement nine minimum controls to reduce CSOs and their effects on receiving water quality. These nine controls include the following:



1. Conduct proper operation and regular maintenance programs for the combined sewer system and the CSO outfalls;
2. Maximize use of the collection system for storage;
3. Review and modify pretreatment programs to ensure that CSO impacts are minimized;
4. Maximize flow to the publicly-owned treatment works for treatment;
5. Prohibit CSOs during dry weather;
6. Control solids and floatable materials in CSOs;
7. Develop and implement pollution prevention programs that focus on contaminant reduction activities;
8. Notify the public; and
9. Monitor to effectively characterize CSO impacts and the efficacy of CSO controls.

Implementation of Phase I is meant to achieve compliance with the technology requirements of the Clean Water Act. Compliance with the minimum controls was required by January 1, 1997. Under the policy, NPDES permittees are also required to develop long-term control plans to select CSO controls. Phase II of the process involves implementing these long-term control plans, which are intended to ensure the implementation of the water quality requirements of the Clean Water Act./84/ San Francisco has implemented the long-term CSO control plan, and based on a RWQCB evaluation, the CSO control requirements in the wet-weather permit comply with both Phase I and Phase II of the federal policy./85/

As explained in the SEIR (pp. V.K.34 - V.K.36), the project's wastewater contributions would fit within the performance parameters of the City's system permits, and thus comply with state and federal regulatory schemes for discharge permits. In addition, the SEIR explores the potential for the project to contribute to CSOs and the potential contribution to impacts related to water quality, aquatic organisms, sediment quality in China Basin Channel and Islais Creek, and water-contact recreation, as discussed under "Evaluation of Potential Water Quality Impacts" on pp. V.K.30-V.K.50. The SEIR concludes that no project-specific significant water quality impacts would result. However, based on the high degree of public concern about CSOs; the lack of conclusive evidence refuting a causal relationship between CSOs, stormwater discharges, and sediment quality; and the recognition that the existing setting may be degraded, the SEIR conservatively finds a potentially significant cumulative impact from CSOs and untreated stormwater discharges. Mitigation Measure K.3 on p. VI.47 would ensure that the project would not contribute to cumulative CSO volumes. The

wording of Mitigation Measure K.3 leaves open the means by which the project-related CSO volumes would be eliminated. Any number of means could be employed to implement Mitigation Measure K.3; however, implementing all available means is likely to be unnecessary and unwarranted.

#### New Water Quality Standards

##### ***Comments***

Water quality objectives are expected to become stricter with implementation of tougher national, state and local pollution discharge elimination regulations and programs (V.K.19-20); (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

And not -- we know that water quality objectives are expected to become tighter with implementation of national, regional, and local pollution discharge elimination regulations and programs. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

##### ***Response***

These comments correctly state that water quality objectives could become more restrictive in the future; however, the SEIR cannot reasonably anticipate how water quality standards will change in time without engaging in speculation, which is not required by CEQA. For this reason, the SEIR relies on standards adopted as of the time the SEIR was prepared. Regardless of the adoption of new standards at some future time, the physical effects of the project would likely be no greater than those presented in the SEIR. If standards were to become more strict and greater controls affecting the project were to be enacted to protect water quality, then the project could have lesser effects than those described in the SEIR, and cumulative effects could also diminish.

#### Definition of Primary Treatment

##### ***Comment***

It is not factually correct for the SEIR to state that "CSO's from these outfalls [in Mission Creek] receive the equivalent of primary treatment during wet weather." Vol. II at V.K.13. See Vol. III at J.3-4 (city-wide, 11 % of combined sewage receives "primary treatment and 12 % receives "flow-through treatment in the transport/storage sewers", i.e. flow through treatment is not primary treatment). See also Vol. II at V.K.2 ("[t]he treatment that occurs within the structures is approximately equivalent to primary treatment"). (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

##### ***Response***

This comment asserts that the flow-through treatment provided for combined sewer overflows (CSO) is not the same as the primary treatment provided by San Francisco's wastewater treatment plants.



While the two forms of treatment are not exactly the same, they function similarly. Primary treatment consists of basic physical processes typically undertaken in a large tank where wastewater is held. As time passes, floatable materials are skimmed from the top and settleable materials settle. The flow-through treatment provided for combined sewer overflows relies on similar physical processes. As wastewater enters the transport/storage facilities, the velocity of the flow decreases and some time passes before combined sewage is discharged, if any discharge occurs. A system of baffles and weirs allows settleable materials to settle and floatable materials to be retained. Because the physical processes used for primary treatment and flow-through treatment are essentially the same, both types of treatment produce similar results (i.e., both reduce the solids portion of the wastewater). To avoid confusion, however, the last sentence in the first full paragraph on p. V.K.13 has been changed as follows:

**CSOs from these outfalls receive essentially the equivalent of primary treatment during wet weather.**

#### **Stormwater Permit**

##### ***Comment***

Currently, all stormwater runoff from the 65 acre project basin flows directly to the bay. I was not aware that the city has a Storm Water Discharge Permit for this discharge. In fact, the City has not been required by the Regional Water Quality Control Board to have a Stormwater permit—because there are supposed to be no stormwater discharges. For this development, all of the stormwater runoff should be considered. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

##### ***Response***

The SEIR considers all stormwater discharges from the Project Area. As shown in Figure V.K.2 on p. V.K.25, the analysis also includes stormwater discharges from the area northeast of the Project Area bounded by Third, Terry A. Francois, and Mission Rock Streets because, although this area is outside the Project Area, stormwater runoff from this area would flow through Project Area sewers.

As discussed under “Phase I Stormwater Regulations” on p. V.K.19, San Francisco does not currently operate under a National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water Permit because the majority of stormwater runoff in San Francisco drains into the City’s combined sewer system, where it is treated and discharged in accordance with NPDES permits for the wastewater treatment plants. San Francisco’s wastewater treatment plant permits include requirements for stormwater quality similar to those of municipal stormwater permits held by stormwater

dischargers elsewhere in the Bay Area. Areas of the City served by separated sewer systems are exempt from the Phase I stormwater regulations because they serve populations less than 100,000.

As discussed under “Phase II Stormwater Regulations” on p. V.K.20, proposed Phase II stormwater regulations anticipated to become final in 1999 will apply to small municipal separate storm sewer systems not currently subject to the Phase I regulations. These regulations would apply to stormwater discharges from the existing Bay Basin and, if the project were constructed, to stormwater discharges from the Central/Bay Basin (the approximately 20% not captured with the initial stormwater flows). San Francisco is pursuing a general municipal NPDES permit under Phase I regulations and plans to comply with Phase II regulations when they take effect.

The Phase II regulations would require San Francisco to develop and implement a stormwater management program to reduce the discharge of pollutants to the maximum extent practicable. Mitigation Measure K.5 on p. VI.47 would require the implementation of an individual Stormwater Management Program that includes Best Management Practices for Mission Bay until the Phase II regulations become final and Mission Bay is included in the City’s Stormwater Management Program.

## **Environmental Justice**

### ***Comments***

The local neighborhoods have been impacted by the Eastside Treatment Plant [Southeast Treatment Plant] and all of the current problems associated with it. Now they will be impacted further with increased CSO’s and no decrease in their current problems . . .

There should be significant mitigation efforts for the neighborhoods affected by the increased flows to the Eastside plant (especially Hunters Point and Bayview). (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

These comments are directed at the DEIR regarding how the existing project alternatives and the impact of combined sewage overflows (CSOs). . . ignore environmental justice. . . The DEIR does not consider the environmental justice impacts of the Mission Bay project. Under NEPA, a draft EIS must “to the fullest extent possible” integrate into the NEPA analysis “surveys and studies” required by other “environmental review laws and executive orders.” 40 C.F.R. § 1502.25(a). Because CEQA was modeled on NEPA, the California courts have generally looked to Federal cases interpreting NEPA as “strongly persuasive” authority. *See No Oil, Inc. v. City of Los Angeles* (1975) 13 Cal.3d 68, 86, fn.21.

Executive Order No. 12,898 (59 Fed. Reg. 7,629)(1994), “Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations,” issued by President Clinton on February 11, 1994 declares



[E]ach Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.

Section 4-4. Subsistence Consumption of Fish and Wildlife of the Executive Order reads,

4-401. *Consumption Patterns.*

In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns.

59 Fed. Reg. 7629. The Presidential Memorandum that accompanied the Executive Order calls for a variety of actions. Specific actions directed at NEPA-related activities, included:

1. Each federal agency must analyze environmental effects, including human health, economic, and social effects, of federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA.
2. Mitigation measures outlined or analyzed in EAs, EISs, or Records of Decision (RODs), whenever feasible, should address significant and adverse environmental effects of proposed federal actions on minority communities and low-income communities.
3. Each federal agency must provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving accessibility of public meetings, official documents, and notices to affected communities.

On September 30, 1997, the United States EPA issued its Interim Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses. The EPA NEPA Guidance Analyses provides an excellent blueprint for an agency to use to ensure that environmental justice concerns are adequately researched, considered, avoided, and mitigated. Specifically, Exhibit 3. Summary of Factors to Consider in Environmental Justice Analysis provides an excellent list of the demographic, geographic, economic, human health, and risk factors that should be used to consider environmental justice in the NEPA process. (26-30).

The EPA NEPA Guidance Analyses, directs an agency preparing an EIS

to consider historical, current, and reasonably foreseeable future circumstances of minority/low-income communities to assess cumulative impacts of new action. . . . Potential cumulative impacts associated with additive/synergistic effects of pollutant loading from new discharges and existing sources and reasonably foreseeable future sources could be significant[.]”

In Chapter 5. Methods and Tools for Identifying and Assessing Disproportionately High and Adverse Effects, the EPA NEPA Guidance Analyses discusses various technical methods and tools that can be used to assess the adverse health, socioeconomic, and distribution impacts of a project. (50-58)

- a. The DEIR is legally inadequate in its consideration of the project’s environmental justice and cumulative impacts on the Southeast neighborhood.

Despite the requirements and guidance discussed above, and the past evidence of environmental racism in Bayview, Hunter Point the DEIR is severely inadequate in its consideration of the environmental justice aspects of the project. The DEIR fails to analyze the demographics of the communities impacted by the project. Bayview/Hunter Point population is over 86% people of color. . . . a predominantly African-American community that is already overburdened with environmental hazards. (Attachment #4, Hazard waste sites in the Southeast portion of San Francisco provided from Southeast Alliance Environmental Justice and SF Dept. Public Health) There is no specific discussion of the demographics or existing toxic burden faced by Bayview. . . . The transfer of pollution and the risk of toxic and bacteria contamination from one part of San Francisco to the Southeast area raises serious environmental justice concerns that must be adequately analyzed and mitigated.

An analogous attempt to disregard additional impacts to an already over-burdened community was recently rejected by the Second Appellate District in Los Angeles Unified School District v. City of Los Angeles, 97 Daily Journal D.A.R. 13373 (filed October 22, 1997) (finding EIR inadequate because it concluded that there would be no significant impact on schools from increased traffic noise because the ambient noise level at the schools already exceeded the State noise standard). In Kings County Farm Bureau, the court held that “one of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant, assuming threatening dimensions only when considered in light of the other sources with which they interact.” 221 Cal.App.3d at 720.

- b. The DEIR is legally inadequate because it fails to mitigate the environmental justice impacts of the Mission Bay project.

Given the seriousness of the environmental justice impacts of the Mission Bay project, further analysis and mitigation measures are required. The EPA NEPA Guidance Analyses suggests the following mitigation measures be used to mitigate environmental justice impacts:

- Establishment of a community oversight committee to monitor progress and identify community concerns.
- Reducing or eliminating other sources of pollutants or impacts to reduce cumulative impacts.



- Conducting medical monitoring on affected communities and providing treatment or other responses if necessary.
- Providing assistance to an affected community to ensure that it receives at least its fair (i.e. proportional) share of the anticipated benefits of the proposed action (e.g., through job training, community infrastructure improvements).
- Identifying clear consequences and penalties for failure to implement effective mitigation measures.

(EPA NEPA Guidance Analyses, page 42-43). The DEIR has neither considered the EPA NEPA Guidance, nor taken any of these steps.

All of these actions and guidelines make it clear that the City of San Francisco would be abusing its discretion under NEPA and CEQA if it failed to adequately consider, analyze, and mitigate any and all environmental justice impacts from the Mission Bay project.

These comments are directed at the DEIR regarding how the existing project alternatives and the impact of combined sewage overflows (CSOs). . . fails to consider cumulative impacts of the project. . . . Currently, Bayview's Southeast wastewater treatment plant handles 80% of all San Francisco's polluted sewage water every year. However, the additional one billion gallons of wastewater generated from Mission Bay would go directly through Bayview as would the brunt of combined sewage overflows to Islais Creek. . . .

The DEIR fails to analyze the existing environmental hazards facing Bayview, Hunters Point, or southeast corridor of the City; additionally, while the separation of stormwater and sewage in the Central Basin of Mission Bay will reduce overflows events at the new development, it will increase the volume of wastewater and the troubles that come with it to Bayview. . . . The Mission Bay project DEIR does not consider comprehensive wastewater alternatives to help alleviate environmental injustice and protect human health. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

We are concerned about the impact of the proposed wastewater plan for the Mission Bay/UCSF project on the environment - both as an individual project & as part of the cumulative, massive development on the City's bayside. We are particularly concerned about the effects of placing an additional wastewater burden on the Bayview/Hunters Point neighborhood, degraded shoreline, and nearshore Bay environment. This neighborhood receives a hugely disproportionate share of the City's wastewater burden. The 25 year old centralized system sends 80% of the City's sanitary sewage (100% of the sanitary sewage of the City's eastern watershed) and a huge portion of the City's wet weather/primary sewage and stormwater overflows to the Bayview/Hunters Point neighborhood, with a policy of "send all stormwater to Bayview." (*Jeff Marmer, Coalition for Better Wastewater Solutions*)

The environmental review's failure to describe with any particularity a plan to mitigate the adverse impacts of the estimated increases in wastewater to be sent to the Hunters Point sewage plant. Increased wastewater flows from the Mission Bay project are estimated to reach almost 1 billion gallons above what is currently handled by that plant. A plan specifying, among other things,

alternative localized treatment and water conservation measures, designed to maintain, as much as is feasible, the current flows to the Hunters Point plant should be evaluated as part of the SEIR. **LARGE PROJECTS SHOULD NOT RESULT IN NEW WASTE LOADS TO THE HUNTERS POINT PLANT. . .**

As for flows into the sewage plant, the SEIR must await the comments of the two technical review committees and must propose measures that will prevent, as much as is feasible, increases in wastewater flow to the Hunters Point. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

*Failure to consider disproportionate impacts and environmental justice, as defined by Executive Order No. 12,898 (59 Federal Register 7629)(1994), and to provide sufficient mitigation for those impacts.*

The DEIR does not consider the environmental justice impacts of the Mission Bay project as required under Executive Order No. 12,898 (59 Fed. Reg. 7,629)(1994), "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," issued by President Clinton on February 11, 1994. The Executive Order declares that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.

1. Each federal agency must analyze environmental effects, including human health, economic, and social effects, of federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA.
2. Mitigation measures outlined or analyzed in EA's, EIS's, or Records of Decision (ROD's), whenever feasible, should address significant and adverse environmental effects of proposed federal actions on minority communities and low-income communities.
3. Each federal agency must provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving accessibility of public meetings, official documents, and notices to affected communities.
4. In reviewing other agencies' proposed actions under the Clean Water Act, EPA must ensure that the agencies have fully analyzed environmental effects on minority communities and low-income communities, including human health, social and economic effects.

Under NEPA, a draft EIS must "to the fullest extent possible" integrate into the NEPA analysis "surveys and studies" required by other "environmental review laws and executive orders." 40 C.F.R. § 1502.25(a).

On September 30, 1997, the United States EPA issued its Interim Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses (attached as Exhibit N). The EPA NEPA Guidance Analyses provides an excellent blueprint for an agency to use to ensure that environmental justice concerns are adequately researched, considered, avoided, and mitigated. Specifically, Exhibit 3. Summary of Factors to Consider in Environmental Justice Analysis provides



an excellent list of the demographic, geographic, economic, human health and risk factors that should be used to consider environmental justice in the NEPA process. (Exhibit N, pages 26-30).

As discussed at page 41 of the EPA NEPA Guidance Analyses, an agency preparing an EIS has to consider historical, current, and reasonably foreseeable future circumstances of minority/low-income communities to assess cumulative impacts of new action. Potential cumulative impacts associated with additive/synergistic effects of pollutant loadings from new discharges and existing sources and reasonable foreseeable future sources could be significant[.]”

Although extensive guidance is given in respect to environmental justice concerns, the SEIS/SEIR fails to consider these concerns.

The past evidence of environmental injustice and racism in Bayview-Hunters Point is extensive. Historically, the Bayview-Hunters Point community, a community of nearly 90% people of color, has been the location of San Francisco’s most environmentally degrading industries, including slaughterhouses, wrecking yards, junk yards, ship repair yards, steel manufacturing, materials recycling facilities, sewage treatment, and power generation facilities. In many locations, environmental contamination from these activities still remains. Although the number of residents in Bayview-Hunters Point make up less than 5% of San Francisco’s population, this neighborhood contains or is adjacent to 30% of the contaminated hazardous waste sites under investigation by the California Environmental Protection Agency (CalEPA).<sup>1</sup>

Based on an inventory of toxic sites and sources of pollution conducted in 1996 by the San Francisco Department of Public Health, it is clear that the Bayview-Hunters Point community (zip code 94124) is bearing an environmental burden that is significantly higher than any other neighborhood in San Francisco. For example, the Potrero/Bayview-Hunters Point area is the location of: 25% of permitted air emissions sources; 10% of the toxic air emission sources; 40% of the acutely hazardous materials storage sites; 23% of all underground storage tanks (UST’s); 26% of the registered hazardous materials facilities; and 24% of hazardous waste generators. Furthermore, the Potrero/Bayview-Hunters Point area received 16% of all hazardous waste complaints, and is the location of 23% of all Local Oversight Program Sites, 56% of all CAL sites, and 60% of all potential discharge sites.<sup>2</sup> In addition to the above mentioned evidence for hazardous and toxic materials, the waste water facilities in Bayview-Hunters Point, located in proximity to residential areas, treat and discharge waste matter into the bay via Islais Creek, an area recognized as having fishing for subsistence food. The State Water Resources Board (1993) identified the Islais Creek area above the Third Street Bridge as a potential toxic hot spot.

The above referenced evidence of environmental racism and injustice speaks directly to the disproportionate impacts from the Mission Bay Project’s wastewater stream. The further centralization of sewage treatment in Bayview-Hunters Point, a neighborhood that already bears the burden of 80% of the City’s sewage waste, and the billion gallons of additional flows per year to the plant would exacerbate the problem of a waste water system that only meets Clean Water Act regulations because of exemptions.

The SEIS/SEIR is also legally inadequate because it fails to adequately mitigate the environmental justice impacts of the Mission Bay Project. Although, the SEIS/SEIR proposes mitigation (VI.47, K3 & K4) these are inadequate in light of the serious environmental justice impacts from the project.

While the project, will reduce overflows at the new development, it will increase the volume of wastewater and its negative effects to Bayview-Hunters Point. The transfer of pollution and the risk of toxic and biological contamination from yet another part of San Francisco to Bayview-Hunters Point raises serious environmental justice concerns and is patently unacceptable. . . .

EPA NEPA Guidance Analyses suggest the following mitigation measures to be used to mitigate environmental justice impacts:

- Establishment of a community oversight committee to monitor progress and identify community concerns.
- Reducing or eliminating other sources of pollution or impacts to reduce cumulative impacts.
- Conducting medical monitoring on affected communities and providing treatment or other responses if necessary.
- Providing assistance to an affected community to ensure that it receives at least its fair (i.e. proportional) share of the anticipated benefits of the proposed action (e.g. job training, community infrastructure improvements).
- Identifying clean consequences and penalties for the failure to implement effective mitigation measures.

The SEIS/SEIR has not only not discussed the potentiality for environmental justice impacts, but has not addressed any mitigation for these impacts.

Although, the project is not directly paid for with federal dollars, it does make use of existing facilities that used federal monies in their construction. When an environmental justice claim is made, agencies must assure “early and ongoing” opportunities for public involvement in the permitting process and must conduct a special health and environmental impact analysis “focusing particularly on the minority or low-income community whose health or environment is alleged to be threatened by the facility.”

The City’s failure to address environmental justice concerns, while clear guidelines exist, make it clear that the City is neglecting its duty to protect the health and welfare of the Southeast Community. The City and the Project are in effect making the Bayview-Hunters Point bear the externalities of the project, without receiving any of its direct benefits. . . .

Our support of this project is contingent upon the City and Catellus paying adequate attention to the environmental concerns of SAEJ and the Bayview-Hunters Point community.

Bayview-Hunters Point no longer accepts being the dumping ground for what the rest of San Francisco does not wish to put its own backyard. The residents of the community insist on equity and proper attention to our concerns. . . .

SAEJ suggest the goal of the project should be no net increase in sewage flows (dry or wet weather) to the SWPCP. This alternative will not further burden a strained system and will work toward environmental justice.



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<sup>1</sup> Bayview-Hunters Point Health and Environmental Assessment Project, 1996 Workplan Report.

<sup>2</sup> See "Partial Inventory of Toxic Sites/Factors in San Francisco," prepared by the Department of Public Health, Bureau of Environmental Health Management.

*(Alex Lantsberg, Project Coordinator, Southeast Alliance for Environmental Justice)*

And in order to explain it, I just have to remind you that Mission Bay, according to the paper, will send 100% of the sanitary sewage and 80% of the storm water to the southeast water pollution control plant. That's us. That's us, we live there for 24 hours a day, near that smelly place that the City has put in our community. And this particular project is planning to make it worse for us. It is planning to make us sicker, it is planning to make our daily life worse than it is right now. And on that issue, let's talk about that. . .

Reverse the trend of wastewater flows to Bayview/Hunters Point. We do not want any more sewage, you know, to come into Bayview/Hunters Point.

We are ready to help the City by -- you know, 80% of the sewage of the City comes to Bayview/Hunters Point. Why is that happening to us? And why are they insisting on making it worse for us? *(Ena Aguirre)*

### ***Response***

The comments raise a number of issues related to environmental justice. In particular, they assert that the SEIR is inadequate because it fails to consider disproportionate impacts of the project on minority and low-income communities as required by Executive Order 12898. Executive Order 12898 requires federal agencies to make achieving environmental justice a part of their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations./86/ In accordance with Executive Order 12898, federal agencies typically address environmental justice in their National Environmental Policy Act (NEPA) documents.

The comments assert evidence of environmental injustice and racism in the Bayview-Hunters Point area, and suggest that increasing wastewater and stormwater flows would further burden the Bayview-Hunters Point community. The comments state that the SEIR does not analyze the demographics of this community, its existing environmental hazards, or the project-related public health issues that pertain to it. The comments call for a special health and environmental impact analysis that focuses on the minority and low-income communities of Bayview-Hunters Point, and request that the SEIR adhere to U.S. Environmental Protection Agency (U.S. EPA) guidance for incorporating environmental justice concerns into NEPA studies. They also propose a goal of no net increase in sewage sent to the Southeast Water Pollution Control Plant.

The comments argue that the Executive Order, and hence NEPA guidance, applies to the SEIR because (1) CEQA was modeled after NEPA, and state courts have looked at federal NEPA case law in interpreting CEQA, and (2) although the project would not be constructed with federal funds, it would rely on facilities built with federal funds. The SEIR has been prepared in accordance with CEQA, a state law. NEPA is a federal law that does not apply to the decisions at hand, which involve local and state agencies. Although project-related activities could rely on facilities built with federal funds (e.g., highways and wastewater treatment facilities), these facilities have already been constructed; therefore, NEPA does not apply.

Federal agencies that may undertake major federal actions related to the project could include the U.S. Army Corps of Engineers and the U.S. Coast Guard, as listed under “Summary of Local, Regional, and Federal Approvals” on pp. III.49-III.51. These agencies may undertake NEPA studies, if necessary, when they consider federal approvals for aspects of the project under their jurisdiction. In doing so, they would be expected to comply with the Executive Order regarding environmental justice.

Guidance in interpreting NEPA requirements may be helpful in interpreting CEQA requirements where both requirements are similar, but issues of environmental justice are handled differently under CEQA and NEPA. Whereas NEPA documents must adhere to Executive Order 12898, State CEQA Guidelines Section 15131 directs agencies to focus on the physical changes that would arise from a project, not on its economic or social effects. While economic and social issues may be discussed as they relate to physical effects, they are not themselves considered significant environmental impacts under CEQA. The SEIR evaluates the physical impacts of the project without regard to the racial, ethnic, or economic status of the populations affected. For this reason, the SEIR does not evaluate the demographics of the affected communities, but it does describe the existing and foreseeable future physical conditions of these communities as relevant to the impact analysis.

The comments appear to be most concerned with impacts to the Bayview-Hunters Point community. As summarized under “Significant Environmental Effects that Cannot Be Avoided if the Proposed Project is Implemented” on p. IX.1, the SEIR identifies potentially significant and unavoidable impacts of the project. None of these impacts would disproportionately affect residents of Bayview-Hunters Point.

- Significant potential traffic intersection impacts would occur at or near I-280 and I-80 in the South of Market area, not in the Bayview-Hunters Point area.



- Significant traffic congestion impacts would occur on the Bay Bridge and its on-ramps, but not in the Bayview-Hunters Point area.
- Significant air quality impacts would affect the entire San Francisco Bay Air Basin, not any particular community within the region.
- Significant toxic air contaminants impacts could affect individuals in and near the Project Area, but the distance between the Project Area and the Bayview-Hunters Point area (about 0.75 miles) would provide a substantial buffer from project-related emissions.
- Significant hazardous waste generation and disposal impacts would occur at treatment and disposal facilities typically far from the Project Area, and no hazardous waste facilities in the Bayview-Hunters Point area accept third-party wastes.
- The project would contribute to potentially significant water quality impacts that could occur near-shore, particularly at storm water and combined sewer overflow (CSO) outfalls, but as discussed below, they would not cause significant human health impacts.

As discussed under “Effects of Mass Pollutant Emissions on Sediment Quality,” on pp. V.K.48-V.K.50, the project would increase the volume and duration of CSOs to Islais Creek, which is located in the northern part of the Bayview-Hunters Point area. As stated under “Effects on Water-Contact Recreation” on p. V.K.54, foreseeable cumulative development would increase the duration of CSOs by about 14.1 hours per year or 1.4 hours per overflow. Islais Creek is not typically used for water-contact recreation; therefore the cumulative increase in CSO volumes and durations, and their near-shore effects, would not be a human health issue. Furthermore, the increased volumes and durations of CSOs would be small compared to existing conditions. Nevertheless, Mitigation Measure K.3 on p. VI.47 would eliminate the project’s contribution to the cumulative increase in CSOs volumes and durations, thereby eliminating any possible contribution of the project to potential effects on minority or low-income populations.

The comments note that the Executive Order addresses subsistence fishing, which occurs at various locations along the shore of the Bay. The Executive Order instructs federal agencies to collect, maintain, and analyze information on the consumption patterns of populations who rely on fish for subsistence, and to communicate to them the risks posed by those consumption patterns. As demonstrated by the documents attached with one comment, the California Office of Environmental Health Hazard Assessment undertakes this responsibility. The Mission Bay project would not affect the number of individuals practicing subsistence fishing in the Project Area. The effect of the project would be limited to its contribution to the bioaccumulation of toxic substances in fish. As discussed in the response regarding “Consumption of Bay Fish,” the project would not substantially alter the

concentrations of pollutants in San Francisco Bay and, therefore, would not substantially affect the levels at which fish accumulate toxic substances.

Regarding U.S. EPA guidance with respect to the Executive Order, the project is not subject to the Executive Order, NEPA, or U.S. EPA approval; therefore, U.S. EPA's guidance does not apply to the SEIR. The U.S. EPA guidance identifies potential mitigation measures that include instituting a community oversight committee, reducing other sources of pollution in affected areas, monitoring the health of community members and providing treatment when necessary, providing the affected community with some of the benefits of the project (e.g., jobs or infrastructure), and spelling out clear consequences for any failure to implement appropriate mitigation.<sup>/87/</sup> Notwithstanding the above discussion, these suggested mitigation measures are also unwarranted for the following reasons.

- Establishing a community oversight committee to monitor progress and identify community concerns would not mitigate any significant environmental impact identified in the SEIR.
- Reducing other sources of pollution or impacts would be unnecessary if Mitigation Measure K3 were implemented.
- Conducting medical monitoring and providing treatment would be unnecessary because the project would not pose substantial human health hazards to the Bayview-Hunters Point community.
- Ensuring that affected communities share in the benefits of the project would not relate to physical impacts, although the potential benefits of the project may be considered when making CEQA findings.
- Identifying consequences for failing to implement mitigation would be beyond the scope of the SEIR. Decision-makers could consider specific enforcement mechanisms when they consider the project, in addition to the enforcement mechanisms already available to the City by law.

The comments assert that wastewater flows to the Southeast Plant presently burden the Bayview-Hunters Point community and that increasing these flows would exacerbate existing problems. The Southeast Plant went into operation in 1951. Following certification of a program EIR/EIS (EE74.62, certified May 1974) that included evaluation of alternative ways to most effectively reduce the detrimental effects of the City's waste discharges, the City and County of San Francisco, the RWQCB, and the U.S. EPA approved a Wastewater Master Plan. Pursuant to that Master Plan, as modified since 1974, the decision was made to develop a central treatment system instead of a decentralized system with many plants. As a key component of that system, the Southeast Plant was expanded, and other system components constructed, between 1974 and 1997. Following the



program EIR/EIS on the Wastewater Master Plan, each component of the system received a separate environmental review, 24 in all between 1974 and 1992, and while aspects of the original Wastewater Master Plan were modified in accordance with updated engineering and other technical studies, the basic concept of a central system has remained.

When the decision was made to expand the Southeast Plant in the Bayview-Hunters Point neighborhood, the Bayview-Hunters Point community received certain amenities in return for receiving the facility. These amenities included the Southeast Community Facility, which supports a community center, day care facility, and educational job training programs for the Bayview-Hunters Point neighborhood residents. Much of its space is leased to City College of San Francisco. These amenities were provided in recognition of any burdens placed on the Bayview-Hunters Point community from the expanded Southeast Plant; they were not mitigation measures for any specific physical environmental impacts. Similarly, wetlands enhancement and bank planting were carried out on the north edge of Islais Creek as part of the construction of transport/storage sewers and a pump station between César Chavez Street and the creek.

Responses to specific concerns regarding the Southeast Plant are provided in the response regarding “Background Regarding Existing Combined Sewer System” on pp. XII.232- XII.238. Evidence does not suggest that the project would result in any substantial change in conditions in the Bayview-Hunters Point area. Because existing problems associated with the Southeast Plant are not associated with the project (as discussed in the responses regarding “Sewer Flooding” pp. XII.392- XII.394 and “Odors” pp. XII.394-XII.396), a policy of not increasing flows to the plant is unwarranted, unreasonable, and impractical. Furthermore, the full capacity of the Southeast Plant was considered in accordance with CEQA./88/

In conclusion, although the environmental justice concerns expressed by the comments cannot be considered significant impacts under CEQA, their inclusion here ensures that they will be reviewed and considered by project decision-makers when considering project approval. The SEIR has carefully considered all project-specific, as well as cumulative, impacts of the project as required by CEQA.

#### Consumption of Bay Fish

##### *Comments*

A 1992 CBE survey of 400 anglers showed that over 70% of people fishing the Bay are people of color, and over 50% of anglers and their families consume the fish they catch. The State Water Resources Control Board (SWRCB) has listed central San Francisco Bay as impaired on the basis of

field surveys of water column, sediments, sediment toxicity, bivalve bioaccumulation, and water toxicity. (SWRCB, 1996 California Water Quality Assessment Report, January 1997)

The contaminants of primary concern include mercury, copper, selenium, diazinon, and polychlorinated biphenyls (PCBs). The State EPA has issued health warnings for Bay-caught contaminated fish since the 1970s, and children and pregnant or breast-feeding women are advised to eat no more than two to eight ounces of Bay fish per *month*. (See attachment #3 "Health Advisory on catching and eating fish"). CBE surveys show that many Bay anglers and their families eat from three ounces to as much as a pound per *day*. The study found that on average people of color anglers and their families consume 21% more grams of fish per person per day than their white counterparts.

The 1995 San Francisco RWQCB report, "Contaminated Levels in Fish Tissue from San Francisco Bay" finds that commonly caught and consumed white croaker and shiner surf perch contain alarmingly high levels of mercury, PCBs, dioxin at all 3 San Francisco sites, Pier #7, Islais Creek, and Double Rock (Candlestick). In 1997, CBE worked with the City and County of San Francisco Department of Public Health to post metal health warning in eight language signs across the Bayside shoreline.

Negative impacts on beneficial use at Islais Creek is of central concern. The DEIR states,

At Islais Creek facilities, the annual overflow duration was estimated to increase by 14.1 hours, or 1.4 hours per flow. No water contact recreation occurs in the water near the facilities, and the increase in overflow duration would have no substantial impact in this area of the Bayside shoreline under cumulative scenario. Volume II V.K.54

CSOs not only contribute to pathogens contamination of shorelines, CSOs contribute heavy dumping of toxic pollutants which enter the food chain. Islais Creek is a favorite fishing spot for community members in the Southeast corridor, with families fishing from the banks and pier. As an identified toxic hotspot, with four existing overflow pipes, and fish health warning signs posted, beneficial use will be "substantially impacted" by the increased volumes of overflows as stated in the DEIR. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

The toxics. For the last five years Safer, which is a project of Communities for a Better Environment, have been working around educating them, around fish consumption.

Over 75% of the people that are eating Bay fish are people of color and immigrants. 70% of those people eat the fish that they catch and 66% of those people didn't even know about the health effects.

For San Francisco, fish tested at Islais Creek, which is near Bayview, and Pier 7 which is near Chinatown, indicated levels of concern PCBs and mercury. (*Mike Thomas, Communities for a Better Environment*)

### **Response**

Tables V.K.2, V.K.3, and V.K.4 (pp. V.K.35, V.K.37, and V.K.39) estimate foreseeable increases in pollutant loads from treated effluent, combined sewer overflow (CSO), and stormwater discharges



for certain constituents. With the project, effluent loads would likely increase by about 2.8%, and CSO loads would increase by about 0.22%. Stormwater loads would vary, with possible increases ranging from about 10% to 60%, depending on the pollutant considered. For pollutants not listed in Tables V.K.2, V.K.3, and V.K.4, potential increases in loads would likely mirror those included in the tables. Implementation of Mitigation Measures K.3 and K.4 on p. VI.47 would reduce pollutant loads from CSOs and stormwater (refer to the response regarding “Illustrative Mitigation Scenarios,”) pp. XII.253-XII.277.

Some pollutants found in the Bay are transported among various organisms through the food web. For example, benthic organisms live within a relatively thin layer of the sediments at the bottom of the Bay. They ingest the sediments and can accumulate some pollutants deposited there. Some organisms accumulate certain pollutants at levels that can be orders of magnitude above the concentrations of the surrounding waters in which the organisms live. Therefore, certain pollutants from the Project Area could contribute to existing pollutants already moving through the food web.

However, the levels of pollutants found in Bay fish and other organisms depend on the environmental concentrations of the pollutants. The project would not likely affect pollutant concentrations in Bay fish because it would not measurably affect overall pollutant concentrations in the Bay, including the pollutant concentrations of settleable materials discharged to Bay waters. Although the project could incrementally increase the amount of settleable materials discharged to the Bay, the pollutant concentrations in any new sediments would be similar to or less than the pollutant concentrations of the existing sediments (to the extent that past CSOs may have contributed to pollutant concentrations and current discharges occur far less frequently and are of higher quality). As the sediments rise, the benthic organisms rise, always remaining in the uppermost layer of sediments. Therefore, benthic organisms would continue to be exposed to roughly the same or lower concentrations of pollutants as they are now.

The potential for pollutants to be transported through the food web and, in some cases, accumulate within Bay organisms has been considered by the Regional Water Quality Control Board (RWQCB) in developing its water quality objectives. Because programs based on numerical objectives for individual pollutants and toxicity objectives do not fully consider the accumulation of these pollutants, the RWQCB has initiated a program requiring major dischargers to monitor sediments and bioaccumulation near discharge sites. Information from such local monitoring will be assessed to ensure that Basin Plan objectives regarding pollutant accumulation in sediments and aquatic organisms are met.<sup>89/</sup> The RWQCB also accounts for the issue of bioaccumulation in preparing its list of impaired water bodies, described under “Impairment of Central San Francisco Bay” on p. V.K.8.

Many of the pollutants targeted for a Total Maximum Daily Load (TMDL) process (e.g., mercury and polychlorinated biphenyls [PCBs]) can potentially bioaccumulate through the food web. For an additional discussion relating to the TMDL process, refer to the text under "San Francisco Bay Basin Water Quality Control Plan (Basin Plan)" on p. V.K.16 and the response regarding "Pollutant Loads and Federal and State Antidegradation Policy," pp. XII.367-XII.370.

Although the project could contribute to pollutant loads transported through the food web (albeit not sufficiently to substantially alter the pollutant concentrations observed in fish), it would not likely result in increases in the number of individuals fishing in the Bay, including people of color and immigrants. Regarding potential environmental justice issues, refer to the response regarding "Environmental Justice," pp. XII.378-XII.392.

### Sewer Flooding

#### *Comments*

The combined sewer strategy has involved enormous costs, wet-weather components of the existing system cost approximately \$900 million and the dry-weather components cost approximately \$550 million. (Attachment #5, April 10, 1998 fax from Dave Jones of the PUC to Wendall Chin/CBE) Further, the system took 10 years to be constructed, does not prevent frequent pathogen contamination of beaches, and still results in manhole overflows.

Immediate benefits of removing stormwater from Mission Bay project would include reducing the overflows from street manholes in the Southeast area, total volume to the Southeast plant, and odor problems. Street manhole flooding is a City-wide issue which affects the Southeast and Sunset neighborhoods most directly. These flooding incidents are a violation of San Francisco's permit and directly impact the quality of life of resident, business owners, and public health. With the Mission Bay project and its estimated one billion gallon annual wastewater flow how many more manholes will pop off? . . . (Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment)

Secondly, there are many illegal overflows from street manholes, especially in the Southeast, that indicate that the system is not performing as expected and is out of compliance. (Jeff Marmer, Coalition for Better Wastewater Solutions [letter from John Rosenblum, Ph.D., Rosenblum Environmental Engineering; attachment to Mr. Marmer's letter])

Secondly, there are many illegal overflows from street manholes, especially in the Southeast, that indicate that the system is not performing as expected and is out of compliance. (Jeff Marmer, Coalition for Better Wastewater Solutions [letter from Robert W. Rawson, International Organic Solutions; attachment to Mr. Marmer's letter])

As we know, since it's raining now, we have the overflow where feces are running down our street.



The young man that spoke earlier proudly stated that he had been the one opposing the cross-town tunnel that was promised to those of us that lived in Bayview/Hunters Point 25 years ago.

If that tunnel had been built 15 years ago, feces would not be running down our streets like it is today. (*Espanola Jackson*)

***Response***

Collection system flooding is primarily caused by undersized or hydraulically inadequate sewers, although there are some areas that flood because they are below official City grade. When it rains and the collection system fills, local sewer inadequacies can cause local ponding of stormwater because stormwater cannot get into the catch basins. During an extreme storm, an excessively inadequate sewer can even cause flow from within the sewer to exit, usually through a manhole. This type of flooding presents a potential public health hazard as the flow exiting the sewer includes a small percentage of sanitary sewage.

Because the primary cause of flooding is undersized sewers, it is a localized problem requiring localized solutions. One possible solution is to replace the undersized sewer with a larger pipe. Another possible solution is to divert flow upstream. However, flooding caused by an inadequate local sewer would not be relieved by transporting flow from the Southeast Water Pollution Control Plant to the Oceanside Water Pollution Control Plant (via a Crosstown tunnel or any other route), by diverting all flows from Mission Bay away from the Southeast Plant, or by increasing the treatment rate at the Southeast Plant. See the response regarding "Crosstown Tunnel," pp. XII.277-XII.278 for additional discussion of its status.

The San Francisco Public Utilities Commission is developing a Strategic Plan for the Clean Water Program. The goal of this document is to identify the major issues currently facing the City's wastewater infrastructure, identify the potential capital improvements needed to respond to those issues, develop a process and criteria for prioritizing the improvements, present an action plan for the Clean Water Program, develop a financial plan for the priority improvements, propose a public information and outreach plan, and describe implementation strategies for the recommended improvements. As part of this process, additional flood control projects (other than those currently underway) will be ranked against other recommended improvements. In general, flood control projects are expected to receive a high priority throughout this process.

The City maintains a list of all known structurally and hydraulically inadequate sewers that is updated on a regular basis. Every year, funds are allocated to projects addressing these inadequacies. Since 1978, the City has spent over \$90 million on projects related to the collection system. In 1994, voters approved a \$149 million bond measure that would have allocated \$79.4 million to collection

system inadequacies. However, of the \$79.4 million in voter-approved flood control bonds, \$54.8 million cannot be sold under the terms of Proposition H, passed by San Francisco voters in June 1998. Therefore, many of the flood control projects that were to be funded by the 1994 bond measure no longer have an identified funding source. As of August 1998, there are \$160.4 million worth of identified projects to repair hydraulically inadequate sewers. Most of these projects are in three districts: Bayview-Hunters Point (\$10.5 million), McLaren Park (\$29.8 million), Richmond (\$14.8 million), and Sunset (\$29.8 million).

Nevertheless, the City is currently implementing four sewer improvement projects to address flooding problems in the southeast quadrant of the City. The Joseph K. Lee Recreation Center Project was recently completed. The Rankin Drainage Basin Improvement Project is an ongoing project that is expected to be completed by the end of the year. For the Yosemite/Egbert Sewer Project, bids have been accepted for the construction contract, and the City is in the process of selecting a contractor. The project could be completed by next summer. The Sunnydale Sewer Improvements Project is in the early planning stages, but construction could start by the year 2000.

With regard to the City's permits, the comments do not specifically identify which permits the City is allegedly violating. The City's NPDES permit regulates the quality of wastewater discharged by the City and does not address flooding. Comments regarding flow volumes to the Southeast Plant are responded to in "Environmental Justice" on pp. XII.378-XII.392. Comments regarding odor problems are referred to "Odors" below. Comments regarding pathogen contamination of beaches are responded to in "Pathogenic Bacterial Contamination" on pp. XII.350-XII.354 and "Water-Contact Recreation" on pp. XII.354-XII.357.

### Odors

#### *Comments*

Alternatives need to address this environmental injustice. Odor complaints from neighboring residents directly resulting from the combined system and its volume, have been alarming. The TRC has concluded that if a plant is creating such odors then it is not effectively working and overloaded. (Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment)

#### *Response*

Regarding odors emanated by the Southeast Water Pollution Control Plant, an odor-sampling and analysis study performed by the City during the Fall of 1997 found that the most significant sources of odors at the Southeast Plant are the following facilities or operations (in order of greatest to least



off-site odor impact): digestion, sludge cake loadout, startup of the old primary sedimentation tanks, new primary sedimentation tanks, sludge thickening, normal operation of the old primary sedimentation tanks, sludge cake storage, sludge dewatering, and old headworks. Most odors detected by the general public are gases resulting from wastewater treatment processes. These gases include hydrogen sulfide, the most common sewer and wastewater gas, ammonia, resulting from solids processing and handling, and other reduced and oxidized compounds. In general, odorous compounds are the result of biological activity, such as anaerobic decomposition on organic matter containing sulfur and nitrogen. These biological processes are normal processes typical to most treatment plants, and resulting odors indicate that the plant is operating correctly and effectively. Odors are not related to the treatment capacity of the plant. Thus, although the project would increase the influent into the Southeast Plant by about 2.8%, the project does not propose changes to the biological processes or physical facilities of the Southeast Plant. Therefore, the project would have little, if any, effect on odor levels emitted by the Southeast Plant.

To reduce existing odors from the Southeast Plant, the City has prepared an Odor Control Master Plan for the Southeast Plant, independently of the Mission Bay project, that evaluates various alternative odor control measures to reduce off-site odor impacts.<sup>/90/</sup> The plan recommends a plant-wide odor-control program to meet the odor objective of achieving odor levels at the fence line of the Southeast Plant or nearest receptor that are as close as possible to non-detectable on a normal basis. The Odor Control Master Plan identifies five categories of odor control measures: chemical addition to wastewater, wastewater process design, operational procedures, foul air collection and treatment, and enhanced atmospheric dispersion.

The Odor Control Master Plan has a prioritized list of recommended odor control measures that includes "Fast-Track Projects" and "Bond Initiative Projects." Fast-track projects include odor control measures that are relatively less expensive, have relatively high odor reduction benefits, can be implemented using existing, already-approved budgets and funds, can be fully implemented over a period of about two years, and have an estimated capital cost of about \$3.7 million and an estimated annual operating cost of about \$340,000. Bond initiative projects are the remaining projects that must be implemented in order for off-site odor impacts to meet the off-site odor objectives. These projects are more costly than the fast-track projects, and as a result, funding is currently not available for these projects, and a bond initiative would be needed to obtain the necessary funds. Bond initiative projects are also more complex and will take more time for design and construction. The estimated capital cost for bond initiative projects is about \$50 million with an annual operating cost of about \$490,000.

Funding that was available for some of these projects through 1994 voter-approved bond funds has been frozen by Proposition H, passed by San Francisco voters in June 1998. Funding for bond initiative projects would need to be obtained through passage of a new bond initiative.

Interim control measures are currently being implemented to minimize odor problems. Along with operational changes, these measures include replacement of corroded gas piping which contributes to over-pressurization and resulting gas leaks, and addition of ferric chloride to the sludge blending tank, which would reduce hydrogen sulfide levels in the digester gas resulting in a reduction in strength of the digester gas odors.

Regarding odor complaints, information about the public complaint history of the Southeast Plant is presented in the Odor Control Master Plan. During 1995 through 1997, less than 100 complaints regarding odors at the Southeast Plant were received by the City from 23 individuals, with one individual accounting for over 60 percent of the complaints. Slightly more than half of the other individuals reported odors in the residential area on or near Phelps Street at the south end of the plant. These complaints accounted for approximately 85 percent of all complaints. As discussed above, full implementation of the fast-track projects and bond initiative projects would meet off-site odor objectives in the adjacent community. Regarding potential environmental justice issues, refer to the response regarding "Environmental Justice" on pp. XII.378-XII.392.

### **Stormwater Pollutant Loading**

#### ***Comment***

Finally, while the Project-related increase in pollutant loading into the Bay (0.2%) is not considered significant because it represents a small portion of total Bayside discharges, the DEIR offers no studies of the effects of the proposed Project wastewater plan on pollutant loading into Mission Creek, an important area for fish and wildlife. Nor is any evidence offered in the DEIR of the extent to which capture of the first flush of stormwater would reduce pollutant loads brought by excess stormwater into Mission Creek. Given the current state of the Creek as a dreadful toxic hot spot and its role at the same time as important habitat for Bay fish, this information must be presented and discussed in the EIR before the Project can be approved. (*Trent W. Orr, Attorney at Law*)

While studies show that the proposed plan for Mission Bay would divert initial flows into the Combined Sewer System, and the project related increase in pollutant loading (0.2% - 2 million gallons per year) into the Bay is "not significant" because it represents such a small portion of total Bayside discharges, there have been no studies on the effects of the proposed plan on pollutant loading into Mission Creek, and there is no evidence that capture of the "first flush" of stormwater would reduce pollutant loadings of the excess stormwater into Mission Creek. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)



No study was done on the pollutant loadings of storm water in excess of what could be captured and treated at the plant into Mission Creek or the Bay, and this concerns us. . .

And while studies show that the proposed plan for Mission Bay will divert initial flows into the combined sewer system, and the project-related increase in pollutant loading, which is .2 percent into the Bay, is not significant because it represents such a small percentage of total bayside discharges. There have been no studies on the effects of the proposed plan on pollutant loading in Mission Creek, and there is no evidence that the capture of the first flush of storm water will reduce pollutant loadings of the excess storm water into the creek. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### ***Response***

These comments say that the SEIR understates impacts related to stormwater discharges, and does not study the effects of pollutants on China Basin Channel. They contend that the capture of initial stormwater flows would not reduce the pollutant loads of the excess stormwater flowing to China Basin Channel.

Beginning on p. V.K.22, the SEIR evaluates impacts related to stormwater as well as wastewater discharges. In characterizing the volume and quality of stormwater and wastewater discharges (described under “Quality of Municipal Wastewater from the Project” on pp. V.K.22-V.K.23 and under “Evaluation of Potential Water Quality Impacts” on pp. V.K.30-V.K.40), the SEIR provides a reasonable description of how typical stormwater and wastewater volumes and quality could foreseeably change with the project. Similarly, the SEIR’s evaluation of the effects of pollutants on China Basin Channel (presented under “Effects of Mass Pollutant Emissions on Sediment Quality” on pp. V.K.48-V.K.49 and under “Sediment Quality” on pp. V.K.53-V.K.54) pays careful attention to the effects of pollutants on China Basin Channel. The SEIR specifically concludes that the project would contribute to potentially significant cumulative impacts to China Basin Channel (Mission Creek) and Mitigation Measure K.4 on p. VI.47 is suggested to address the project’s contribution to impacts on Channel sediments. See also the response regarding “Stormwater Treatment,” pp. XII.291-XII.294.

As discussed under “Volume and Quality of Direct Stormwater Discharge to Bay” on pp. V.K.38-V.K.40, the SEIR does not assume that the capture of initial stormwater flows would reduce the pollutant loads of the excess stormwater flowing to China Basin Channel. Instead, the SEIR conservatively assumes that pollutant loads in stormwater would be proportional to stormwater volumes, regardless of when during a storm the stormwater is created. Stated another way, pollutant concentrations in stormwater are assumed to remain constant throughout the duration of any given storm. This conservative assumption is contrary to conventional wisdom, which would lead one to assume that the initial stormwater runoff from a storm would contain higher pollutant loads than the

runoff at the end of a long storm. But as explained under “Diversion of Initial Flows to Combined Sewer System” on p. V.K.26, this is not always the case because the transport of pollutants in stormwater depends on the duration of the preceding dry-weather period, rainfall patterns, rainfall intensity, the chemistry of individual pollutants, and site-specific conditions. The SEIR is conservative in making no adjustment to account for this potential benefit of the proposed capture of initial stormwater flows.

The water quality impacts of the project are summarized under “Effects on Receiving Waters” on pp. V.K.40-V.K.50 and under “Cumulative Issues” on pp. V.K.50-55. Although the analysis does not demonstrate any significant impacts for the project by itself, the SEIR conservatively concludes that the project could contribute to a potentially significant cumulative impact in the near-shore environment of China Basin Channel from treated combined sewer overflows (CSO) and direct stormwater discharges. This conclusion is based on the high degree of public concern about CSOs; the lack of conclusive evidence refuting a causal relationship between CSOs, stormwater discharges, and sediment quality; and the recognition that the existing setting may be degraded. Mitigation Measures K.1 through K.6 on pp. VI.45-VI.50 would reduce or eliminate potential impacts to the extent feasible. Mitigation Measure K.4, in particular, addresses the quality of stormwater discharges to China Basin Channel. However, on p. IX.2 in Chapter IX, Other Statutory Sections, the SEIR conservatively concludes that the project could result in an unavoidable cumulative significant water quality impact, although the project’s contribution to this impact could be reduced to a less than significant level if mitigation measures are imposed.

The following change has been made to the first bulleted item on p. IX.2 in Chapter IX, Other Statutory Sections:

- ~~contribution to cumulative water quality impacts (although the project’s contribution to cumulative water quality impacts could be reduced to less-than-significant levels if mitigation measures are imposed analysis does not demonstrate a significant impact).~~

No information has been presented that would lead one to conclude a new finding of significance, and no evidence has been presented that contradicts or refutes the findings of the SEIR.

#### *Comment*

Urban Ecology has reviewed the Mission Bay EIR, and has found that it severely underestimates the impacts related to stormwater and wastewater collection and treatment that would occur as a result of the Mission Bay project. The EIR needs to include additional analysis of these impacts, and it also needs to include additional measures to attempt to mitigate these impacts. In addition, some impacts



of the project that were not identified in the EIR cannot be completely mitigated. Under CEQA, the Draft EIR needs to be rewritten to disclose these unmitigable impacts. The Draft EIR must also be recirculated for additional public review comment, to allow for review of additional identified impacts and to allow for review of new significant information that has not been supplied to date. (*Kate White, Program Director, Urban Ecology, Inc.*)

### ***Response***

The comments of Urban Ecology, Inc. have been considered and responded to in various responses above regarding “Decentralized Management of Sanitary Wastewater,” pp. XII.240-XII.244; “Stormwater Treatment,” pp. XII.291-XII.294; “Reductions in Combined Sewer Overflow Volumes,” pp. XII.295-XII.298; “Assumptions Used in the Bayside Planning Model,” pp. XII.303-XII.305; “Levels of Treatment Assumed in the Bayside Planning Model,” p. XII.306; “Rainfall Data Used in the Bayside Planning Model,” pp. XII.307-XII.311; “Cumulative Assumptions,” pp. XII.315-XII.322; “Wastewater Flows,” pp. XII.322-XII.327; “Designation of China Basin Channel and Islais Creek as Toxic Hot Spots,” pp. XII.327-XII.334; “Water Discharges from Research and Development Activities,” pp. XII.361-XII.367; and “Wet-Weather NPDES Permit,” pp. XII.371-XII.376. Project impacts related to increases in wastewater, CSO, and stormwater volumes have been adequately analyzed in the SEIR, and all identified significant impacts are mitigable to a less-than-significant level with implementation of Mitigation Measures K.1 through K.6. No information has been presented that would lead one to conclude a new finding of significance, and no evidence has been presented that contradicts or refutes the findings of the SEIR.

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NOTES: Hydrology and Water Quality

1. City and County of San Francisco, U.S. Environmental Protection Agency, *Final Environmental Impact Report & Statement, San Francisco Wastewater Master Plan*, Planning Department File No. EE 74.62, State Clearinghouse No. 74040876, May 1974, pp. 78 - 88, and Appendix A.
2. City and County of San Francisco, U.S. Environmental Protection Agency, *Final Environmental Impact Report & Statement, San Francisco Wastewater Master Plan*, Planning Department File No. EE 74.62, State Clearinghouse No. 74040876, May 1974, Table IX-1, p. 174.
3. City and County of San Francisco, U.S. Environmental Protection Agency, *Final Environmental Impact Report & Statement, San Francisco Wastewater Master Plan*, Planning Department File No. EE 74.62, State Clearinghouse No. 74040876, May 1974, pp.165-171.
4. City and County of San Francisco, U.S. Environmental Protection Agency, *Final Environmental Impact Report & Statement, San Francisco Wastewater Master Plan*, Planning Department File No. EE 74.62, State Clearinghouse No. 74040876, May 1974, p. 75.
5. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 95-039, NPDES Permit No. CA0038610, Reissuing Waste Discharge Requirements for City and County of San Francisco, Bayside Wet Weather Facilities Including the North Point Water Pollution Control Plant, San Francisco County, February 15, 1995.
6. Brown and Caldwell, *Preliminary Screening of Alternative Wastewater and Stormwater Treatment Technologies, Mission Bay Project*, prepared for San Francisco Public Utilities Commission, July 7, 1998, p. 8.
7. Brown and Caldwell, *Preliminary Screening of Alternative Wastewater and Stormwater Treatment Technologies, Mission Bay Project*, prepared for San Francisco Public Utilities Commission, July 7, 1998, p. 10. According to the report, an 80,000-gallons-per-day (gpd) plant is operating in Burlington, Vermont. The size of plant needed for Mission Bay would be 600,000 gpd.
8. City and County of San Francisco, U.S. Environmental Protection Agency, *Final Environmental Impact Report & Statement, San Francisco Wastewater Master Plan*, Planning Department File No. EE 74.62, State Clearinghouse No. 74040876, May 1974.
9. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.
10. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.
11. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.



12. Beth Goldstein memorandum to Bill Dietrich, EIP; John Bouey, Lee & Ro; Paul Deutsch, Planning; July 22, 1998, re: Revised storage calcs. for mitigated project, Table entitled Mission Bay Central Basin; First Flush: 1972-1985 Preliminary Results, showing weighted 14-year average of 78.4% capture with 1.1 MG total storage.
13. Although these changes could reduce the directly discharged flow and increase the proportion of stormwater captured for treatment, the proportion of diverted flow to directly discharged flow is conservatively assumed for purposes of analysis to be 80:20 for the Central/Bay Basin.
14. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.
15. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.
16. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.
17. For further details, Table J.1 in the Appendix to the Summary of Comments and Responses compares the effluent, overflows, and stormwater volumes that would be generated under the mitigation scenarios to the Base Case. This table will be incorporated into Appendix J, Hydrology and Water Quality, following p. J.7.
18. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.
19. Gail Boyd, John Davis, Gary Palhegyi, and Peter Mangarella, Woodward-Clyde Consultants, "Analysis of Stormwater Management Options at Mission Bay," prepared for the City and County of San Francisco, August 24, 1998.
20. For further elaboration, Table J.4 in the Appendix to the Comments and Responses Document presents estimated mass pollutant loading from stormwater discharges for both mitigation scenarios. This table will be incorporated into the Appendix J, Hydrology and Water Quality, following p. J.7. Table J.4 mirrors Table V.K.4 on p. V.K.39.
21. For further details, Table J.5 and J.6 in the Appendix to the Comments and Responses Document present estimated copper and zinc loading to near-shore waters for both mitigation scenarios. These tables will be incorporated into the Appendix J, Hydrology and Water Quality, following p. J.7.
22. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995.
23. CH2M Hill, *Bayside Overflows*, prepared for the City and County of San Francisco, June 1979, Chapter III, pp. III-3-III-5.
24. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, pp. 3-2, 3-8.

25. Woodward-Clyde Consultants, *Santa Clara Valley Nonpoint Source Study, Volume I: Loads Assessment Report*, prepared for the Santa Clara Valley Water District in association with Kinnetic Laboratory, February 22, 1991, pp. 6-66 to 6-72.
26. Natural Resources Defense Council, *Testing the Waters -- 1998*, 1998, Chapter 2, pp. 1-2.
27. Wendy Iwata, Project Manager, City and County of San Francisco Public Utilities Commission, telephone message, July 15, 1998.
28. Brown and Caldwell, *Preliminary Screening of Alternative Wastewater and Stormwater Treatment Technologies, Mission Bay Project*, prepared for San Francisco Public Utilities Commission, July 7, 1998, p. 1.
29. Lee & Ro, letter to David Knadle, Project Manager at Catellus Corporation, Subject: Alternative Water Quality Control Technologies for Mission Bay Project, February 20, 1998.
30. City and County of San Francisco Planning Department, and San Francisco Redevelopment Agency, *San Francisco Giants Ballpark at China Basin, Final Environmental Impact Report*, Planning Department File No. 96.176E, State Clearinghouse No. 96102056, certified June 26, 1997, pp. II.18-II.21.
31. Beth Goldstein and Leah Orloff, San Francisco Public Utilities Commission, and Chis Phanartzis, Hydroconsult Engineers, memorandum to Bill Dietrich, EIP Associates, through Michael Carlin, San Francisco Public Utilities Commission, July 10, 1998.
32. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 94-149, NPDES Permit No. CA0037664, Reissuing Waste Discharge Requirements for City and County of San Francisco Southeast Water Pollution Control Plant, October 19, 1994.
33. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 95-039, NPDES Permit No. CA0038610, Reissuing Waste Discharge Requirements for City and County of San Francisco, Bayside Wet Weather Facilities Including the North Point Water Pollution Control Plant, San Francisco County, February 15, 1995.
34. Vince De Lange, Bureau of Engineering, Department of Public Works, City and County of San Francisco, memorandum to Bill Keaney, re: SEP Influent/Effluent Flow Discrepancies, February 2, 1996.
35. Public Utilities Commission of the City and County of San Francisco, "The Urban Water Management Plan for the City and County of San Francisco; Retail Operations," March 1996, Table II-3, p. 11.
36. City and County of San Francisco, U.S. Environmental Protection Agency, *Final Environmental Impact Report & Statement, San Francisco Wastewater Master Plan*, Planning Department File No. EE 74.62, State Clearinghouse No. 74040876, May 1974, p. 43.
37. To determine the effects of different scenarios, one consistent set of modelled operational parameters was used. Actual distributions of treated CSO discharges may vary as the system is operated to maximize storage, pumping, and treatment capacities in order to minimize discharges of treated CSOs.
38. Regional Water Quality Control Board, San Francisco Bay Region, *Proposed Regional Toxic Hot Spot Cleanup Plan*, December 1997, pp. 29-63.



39. Regional Water Quality Control Board, San Francisco Bay Region, *Proposed Regional Toxic Hot Spot Cleanup Plan*, December 1997, p. 23.
40. Bay Area Stormwater Management Agencies Association, *San Francisco Bay Area Stormwater Runoff, Pollutant Monitoring Data Analysis, 1988 - 1995*, prepared by Woodward-Clyde Consultants, October 15, 1996, Table 5-2.
41. Will Travis, Executive Director, Bay Conservation and Development Commission, telephone conversation with EIP Associates, July 8, 1998.
42. Roberta Schoenholz, Project Manager, Environmental Department, Port of San Francisco, telephone conversation with EIP Associates, August 21, 1998.
43. Rob Lawrence, Regulatory Branch, U.S. Army Corps of Engineers, telephone conversation with EIP Associates, June 26, 1998.
44. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 95-039, NPDES Permit No. CA0038610, Reissuing Waste Discharge Requirements for City and County of San Francisco, Bayside Wet Weather Facilities Including the North Point Water Pollution Control Plant, San Francisco County, February 15, 1995.
45. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2). Water Quality Control Plan*, June 21, 1995, p. 4-2.
46. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, p. 4-11.
47. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 95-039, NPDES Permit No. CA0038610, Reissuing Waste Discharge Requirements for City and County of San Francisco, Bayside Wet Weather Facilities Including the North Point Water Pollution Control Plant, San Francisco County, February 15, 1995.
48. U.S. Environmental Protection Agency, *Quality Criteria for Water 1986*, EPA 440/5-86-001, May 1, 1986.
49. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, p. 3-2.
50. The fact that the Basin Plan Water Quality Objectives for 1-hour average concentrations (applicable to acute toxicity) relate to dissolved pollutants is deduced from the Basin Plan's reliance on U.S. Environmental Protection Agency Ambient Water Quality Criteria expressed as dissolved pollutants. RWQCB, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, Table 3-3, p. 3-9. Marshack, J.B., California Environmental Protection Agency, Regional Water Quality Control Board, Central Valley Region, *A Compilation of Water Quality Goals*, March 1998, Inorganics pp. 5 and 11, Footnotes, p. 1.
51. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 95-039, NPDES Permit No. CA0038610, Reissuing Waste Discharge Requirements for City and County of San Francisco, Bayside Wet Weather Facilities Including the North Point Water Pollution Control Plant, San Francisco County, February 15, 1995.

52. Marshack, J.B., California Environmental Protection Agency, Regional Water Quality Control Board, Central Valley Region, *A Compilation of Water Quality Goals*, March 1998.
53. As noted by one comment, the U.S. Fish and Wildlife Service questions this approach in a *draft* biological opinion prepared for the U.S. Environmental Protection Agency for the California Toxics Rule. U.S. Fish and Wildlife Service, *Draft Biological/Conference Opinion on the Environmental Protection Agency's Proposed Rule for the Promulgation of Water Quality Standards: Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California*, April 10, 1998.
54. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan (Basin Plan)*, June 21, 1995, Table 3-3, p. 3-9.
55. CH2M Hill, *Bayside Overflows*, prepared for the City and County of San Francisco, June 1979, Chapter III.
56. City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, *Bay Benthic Report, San Francisco Bay Outfall Monitoring, Southeast-Islands Creek*, November 1986.
57. The preliminary coliform bacteria results available within about 24 hours represent maxima. Final results are used for reporting purposes, and these require another 48 hours of analysis.
58. Arleen Navarret, Senior Marine Biologist, Water Quality Bureau, San Francisco Public Utilities Commission, telephone conversation with EIP Associates, July 1, 1998.
59. Arleen Navarret, Senior Marine Biologist, Water Quality Bureau, San Francisco Public Utilities Commission, letter to EIP Associates, June 19, 1998.
60. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, pp. 3-2, 3-8.
61. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, p. 2-5.
62. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, p. 2-3.
63. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, p. 2-4.
64. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 95-039, NPDES Permit No. CA0038610, Reissuing Waste Discharge Requirements for City and County of San Francisco, Bayside Wet Weather Facilities Including the North Point Water Pollution Control Plant, San Francisco County, February 15, 1995, Items 10 and 18.
65. Regional Water Quality Control Board, San Francisco Bay Region, Order No. 95-039, NPDES Permit No. CA0038610, Reissuing Waste Discharge Requirements for City and County of San Francisco, Bayside Wet Weather Facilities Including the North Point Water Pollution Control Plant, San Francisco County, February 15, 1995.
66. San Francisco Municipal Code (Public Works Code), Part II, Chapter X, Article 4.1, Section 123(e).



67. San Francisco Municipal Code (Public Works Code), Part II, Chapter X, Article 4.1, Section 123(d).
68. Michelle Schaefer, Environmental Coordinator, UCSF, telephone conversation with EIP Associates, August 20, 1998.
69.
  - a) U.S. Department of Health and Human Services Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, *Biosafety in Microbiological and Biomedical Laboratories*, 3rd ed., May 1993.
  - b) U.S. Department of Health and Human Services, National Institutes of Health, *Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)*, January 1996.
70. U.S. Department of Health and Human Services Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, *Biosafety in Microbiological and Biomedical Laboratories*, 3rd ed., May 1993, p. 17.
71. For purposes of this SEIR, the term "biohazardous material" is defined on pp. V.I.42 and in Appendix H (p. H.2) to include infectious agents that require Biosafety Level 2 or greater safety precautions or cells that contain recombinant DNA molecules with codes that can be expressed to create a protein.
72. U.S. Department of Health and Human Services Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, *Biosafety in Microbiological and Biomedical Laboratories*, 3rd ed., May 1993, p. 22.
73. U.S. Department of Health and Human Services Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, *Biosafety in Microbiological and Biomedical Laboratories*, 3rd ed., May 1993, p. 29.
74. Michelle Schaefer, Environmental Coordinator, UCSF, telephone conversation with EIP Associates, August 20, 1998.
75. William R. Attwater, Chief Counsel, State Water Resources Control Board, Memorandum to Regional Board Executive Officers, et al., October 7, 1987, p. 2.
76. Code of Federal Regulations, Title 40, Section 131.12.
77. *Federal Register*, Vol. 63, No. 6, January 9, 1998, p. 1535 et seq.
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89. Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2), Water Quality Control Plan*, June 21, 1995, p. 4-4.
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## CHINA BASIN CHANNEL VEGETATION AND WILDLIFE

### Edge Treatments and Loss of Wetlands

#### *Comments*

And also the harbor edge should be taken care of in a firmly natural way and not in the way that is stated in the SEIR, such as a riprap, but more natural wetland habitat. (*Torbin Torpe-Smith, Mission Bay Harbor Association*)

We need to go further in terms of . . . protection of habitat than what you see before you today. (*Jon Rainwater, San Francisco League of Conservation Voters*)

Although my concerns are many, I'm speaking specifically to the loss of wetlands. We, the people of San Francisco, are rapidly losing the amenities that have brought diversity, population, industry, and tourism to the City. One of the results of encouragement by our City officials of any and all development is to reduce open space and create a loss of habitat. Our waters and shoreline, our creeks, streams, and open space and the creatures that inhabit these areas need our protection. (*Jean Neblett, Potrero Hill Boosters and Merchants Association*)

This project must benefit all, including the environment. And right now it is not benefiting the environment nearly enough. We should be increasing the habitat for health, environment, especially along the Bay side. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

However, the EIR assumed [the] most destructive bank treatments from the perspective of the habitat: existing wetland, as well as piling on which the birds perched, would be removed and mud banks lined with stone. If this were to be done, the channel would almost certainly be lost as habitat and the great shore birds would no longer grace this special someplace. (*Robert B. Isaacson, President, Mission Creek Conservancy*)

And if we are going to be dumping riprap on the lower and tidal zone as this plan proposes, we are destroying their food supply. And there is nowhere else that they can go. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

I'm concerned about the possible loss or at least degradation of wildlife habitat on Mission Creek. The Mission Bay development plan prepared by the Catellus Development Corp. should be meticulously studied for actions that would lead to such degradation and loss. The S.F. Bay Chapter of the National Audubon Society would probably be happy to assist. Catellus was supposed to create a plan for Mission Bay working with a citizens committee (C.A.C.) with a joint goal to enhance the ecology of Mission Creek. I understand just the opposite is true. The Catellus plan calls for removal of vertical pilings and lining the banks of the creek with large rocks & boulders. Result: Loss of roosting & resting spots & loss of wading access. Goodbye herons, egrets, cormorants, & ducks. (*Donald C. Williams*)



*Response*

Several comments express concerns regarding the loss of wetland and mudflat habitat resulting from the project's proposed edge treatments of rock rip-rap on the north bank of the channel and in a 2-foot-wide strip on the south bank centered on mean low water. The comments state that the proposed edge treatments "assumed by the EIR" were destructive. (Comments that the proposed treatments do not conform with the Citizens Advisory Committee's [CAC] Design Standards and Guidelines for Mission Bay are discussed under that heading on pp. XII.410-XII.413. Comments that address the removal of pilings that are used as perches for birds are discussed separately under "Perching Sites and Other Measures to Improve Channel Habitats," on pp. XII.422-XII.426.) Some comments express the opinion that the SEIR was flawed because it implied that further degradation of the China Basin Channel habitats resulting from the proposed edge treatments was not significant, and cited the SEIR's failure to mitigate such impacts.

The proposed edge treatment for China Basin Channel analyzed in the SEIR is part of the Project Description, and is described and illustrated on pp. V.L.7-V.L.10 in Section V.L, China Basin Channel Vegetation and Wildlife. To ensure a conservative analysis under CEQA, this treatment was intentionally designed by the project sponsors to reflect rip-rap of the maximum area of slope contemplated. Although conservative, the proposed edge treatments analyzed in the SEIR are not the most destructive of possible treatments, as stated in the comments, because they do allow for retention of some area of mudflat and restoration of salt marsh habitat on the south bank of the Channel. The most destructive treatment would be a continuous band of rip-rap on both edges of the Channel with complete loss of salt marsh and mudflat habitat. As described in the SEIR, the northern edge of the Channel between Fourth and Sixth Streets would be covered by a textured rip-rap system of stone from mean low water to mean high water. This treatment would remove approximately 5,800 square feet (0.13 acre) of wetland habitat dominated by pickleweed and would cover another 1,320 square feet (0.03 acre) of unvegetated mudflat. The south edge of the Channel between Fifth and Third Streets is proposed for a 2-foot-wide band of rock rip-rap centered on the mean low water line (below the area where vegetation can be established). This proposed treatment would cover about 1,600 square feet (0.04 acre) of mudflat. The proposed treatment concept for both sides of the Channel between Sixth Street and the western terminus of the Channel would also be rip-rap, covering about 3,635 square feet (0.08 acre) of mudflat and removing about 375 square feet (0.01 acre) of wetland. The total impact from the proposed treatment would be losses of up to 0.14 acre of wetland and 0.15 acre of mudflat. Existing wetland and mudflat habitat on the south edge of the Channel between Fifth and Sixth Streets would remain, and the southern edge of the Channel between Third Street and Fifth Street above 1 foot higher than mean low water (about 8,000 square feet or 0.18 acre) would be available for restoration of salt marsh wetlands.

The project sponsors are currently considering alternative edge treatments (including approaches that include more wetlands and mudflats) that would create less impacts on wetlands and mudflats than the treatment assessed in the SEIR. If alternative edge treatments removing less wetland and mudflat are found to be feasible and are selected, they would be covered by Mitigation Measure L.1 on p. VI.50.

The SEIR did find that the loss of even a small amount of wetland habitat as a result of the proposed edge treatments would be significant, in the context of a detailed discussion of the values of wetlands, the past losses of wetland extent and values, and state and federal policies requiring “no net loss” of wetlands (pp. V.L.10-V.L.11). Mitigation Measure L.1, on p. VI.50, would reduce these impacts to less-than-significant levels. This measure recognizes that use of biotechnical shoreline stabilization measures (such as coconut fiber rolls and blankets) would avoid or minimize impacts on wetland and salt marsh habitats and allow for habitat enhancement opportunities (see also responses regarding “Perching Sites and Other Measures to Improve Channel Habitats” on pp. XII.422-XII.426). It should also be noted that during the Section 404 (Clean Water Act) and BCDC permit processes (as discussed on p. V.L.11), which would require preparation of a habitat mitigation plan whose implementation would be a condition of permit approval, alternatives would need to be considered that would avoid or minimize impacts on wetlands and mudflats, both “special aquatic sites” according to the 404(b)(1) guidelines. The feasibility of biotechnical shoreline stabilization methods as an alternative to rip-rap has been demonstrated by the Corps of Engineers’ Waterways Experiment Station in the Gulf Coast and Eastern Seaboard and by private firms such as EIP Associates in the Bay Area. See also the response in “Mitigation Measures” on pp. XII.426-XII.428.

### **CAC Design Standards and Guidelines**

#### ***Comments***

The CAC and Catellus agreed on. . . design goals and guidelines some time ago that. . . would protect and enhance the tidal creek, Mission Creek. (*Phyllis Ayer, Wildlife Subcommittee, Sierra Club, and Audubon Society*)

Mission Creek is a key focal point of the residential development of Mission Bay, and provides badly needed open space to offset high density (particularly as respects the Mission Bay North residential area); The Design Objectives adopted by the CAC include “respect and enhance the natural environment and wildlife potential of the area”. . . (*Corinne W. Woods, Toxics Subcommittee Chair, Mission Bay Citizens Advisory Committee*)

I think it would be sad to lose an opportunity for the children of Mission Bay in not preserving the mud flats that provide a respite for an otherwise urban environment. . .

So I encourage the CAC’s recommendations on the treatment of the shoreline for the Mission Bay Creek. (*Jeffrey Leibovitz*)



The Mission Bay Citizens Advisory Committee, in cooperation with Catellus, adopted design standards and guidelines which include enhancement of the channel habitat to encourage the birds to specifically forage there. (*Robert B. Isaacson, President, Mission Creek Conservancy*)

Another thing that I heard a lot mentioned. . . was wetland issues and mud flats. Again, it's the recommendations [of] the CAC [that] should be followed. (*Commissioner Mark Dunlop, Redevelopment Agency Commission*)

The Mission Bay Citizens Advisory Committee (CAC), in cooperation with Catellus, adopted Design Standards and Guidelines which include enhancement of the Channel habitat<sup>4</sup> to encourage the birds to continue to forage there. However, the EIR assumed the most destructive bank treatment from the perspective of habitat<sup>5</sup>. Existing wetland as well as piling on which the birds perch would be removed, and the mud banks lined with stone. If this were to be done, the Channel would almost certainly be lost as habitat. The great shorebirds would no longer grace this special place. The present habitat should be enhanced, not degraded, to encourage the birds [to] stay.

Mission Creek habitat should not be degraded. The destructive treatments described in the EIR must be prohibited, in accordance with the CAC Guidelines.

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<sup>4</sup>CAC Standards and Guidelines require enhancement of the tidal ecology:

"respect and enhance the natural environment and wildlife potential of the area. . . in the selection of landscape and channel edge materials" [p 10]

"stabilize the water's edge with natural materials and vegetation at appropriate water elevations, sensitive to the tidal ecology of the Channel"

"maintain gently sloping banks in the intertidal area to encourage foraging shorebirds"

"provide perch pilings in the Channel to attract foraging shorebirds" [pp 75,6]

<sup>5</sup>The EIR assumes the most destructive treatment of the habitat.

Existing wetland would be removed. "State wetland policies reflect the high values of wetland habitat. The project would replace a total of approximately 5,880 square feet. . . of wetland habitat on the north bank of the Channel. . . and approximately 375 square feet. . . on the south bank. . . with a rip-rap, hard-edge treatment. . . The loss of even a small amount of northern coastal salt marsh wetlands. . . would cause a net loss of wetland area and functions, contrary to state and federal policies." (SEIR V.L.10 Loss of Salt Marsh Wetland Habitat)

Existing mud banks on which the birds forage would be covered with stone. The project proposes a primarily hard. . . rip-rap system (a layer of stones) extending upslope from the mean low water line. (SEIR V.L.7 Proposed. . . Edge. . . Treatments)

Pilings on which the birds perch would be removed. "It is anticipated that all piles located in intertidal zones would require removal." (SEIR V.L.13)

(*Robert B. Isaacson, President, Mission Creek Conservancy*)

The DEIR fails adequately to address the inconsistency of the proposed Mission Bay Project with the Design Standards and Guidelines for the Mission Bay development formulated with the participation and endorsement of Catellus and adopted by the City's official Citizens Advisory Committee on that development. Catellus Development company ("Catellus"), the Project proponent, has been working with a Citizens Advisory Committee ("CAC") since late 1996 on the design of the Mission Bay development project, a mile south of Market Street. The CAC was appointed by the Mayor and approved by the Redevelopment Agency. The CAC and Catellus adopted Design Standards and Guidelines that call for enhancement of the tidal ecology of Mission Creek to maintain the presence of the sixty-one species of shorebirds, waterfowl, and other birds that currently forage (and in a few cases, nest) there. The Guidelines specifically provide that Mission Bay development should be

designed so as to “respect and enhance the natural environment and wildlife potential of the area, both in the location and scale of open space areas and selection of landscape and channel edge materials” (Design Standards and Guidelines -- Mission Bay (adopted by the CAC 12/11/97, p. 10); “[s]tabilize the water’s edge with natural materials and vegetation at appropriate water elevations, sensitive to the tidal ecology of the Channel” (p. 75). . . (Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy)

Mission Creek (China Basin Channel), while mostly not included in the Project Area (except for the banks), is surrounded by the development, provides significant open space relief in this extremely high density environment, and is considered in the DS&G as a key focal point of the development. The SEIR should review the proposed development in the context of its effect on Mission Creek, and provide adequate mitigation measures to improve and enhance the Creek. The DSEIR states that the open space system would highlight distinctive features of the Project Area including China Basin Channel and the Bay.” The Proposed Channel Edge and Bridge Treatment (V.L.7-12) does not reflect either the Design Objectives of the DS&G (to respect and enhance the natural environment and wildlife potential of the area, both in the location and scale of open space areas and selection of landscape and channel edge materials) or the Open Space Guidelines for North Channel Esplanade (DS&G p. 75) or Mission Creek Park (DS&G p. 76). (Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee)

### **Response**

Regarding the consistency of the China Basin Channel edge treatments with the Design Standards and Guidelines for Mission Bay, as adopted by the Mission Bay Citizen’s Advisory Commission/1/, the Open Space Design Guidelines include measures cited by the comments such as “develop a softscaped edge along the Esplanade adjacent to the Channel. Stabilize the water’s edge with natural materials and vegetation at appropriate water elevations, sensitive to the tidal ecology of the Channel” and “provide perch pilings in the Channel to attract foraging shorebirds.”/2/ Other guidelines for Mission Creek Park include: “Provide softscape planting along the Channel edge to elevation of mean low tide with vegetation compatible with each tidal zone.”/3/ The CAC Guidelines are not an adopted plan or policy of the City. If the cited guidelines and objectives are adopted as part of the Design for Development documents for the project, the Redevelopment Agency would review the Channel edge treatment for consistency with these policies as part of the design review process for this portion of the open space program. The project sponsors’ initial concept was a conservative depiction of potential Channel edge approaches. As discussed previously, the project sponsors are considering alternative edge treatments that would have less impact on wetland and mudflat habitats. Rip-rap may not be used in all locations of the areas depicted for hard-edge treatments in the SEIR; these issues will be refined through the design review process. In addition, the project sponsors intend to maintain all existing pilings unless they interfere with project development. (Refer to the response “CAC Design Standards and Guidelines” on pp. XII.35-XII.36 in Plans, Policies, and Permits for a discussion of the policy consistency issues and CEQA’s significance criteria regarding conflicts with adopted environmental plans and goals of the community.)



Since the publication of the CAC Guidelines, the project sponsors have worked with parties interested in this issue, including the Mission Creek Conservancy, on revised Channel edge guidelines to be included in the Design for Development. Those guidelines include additional detail regarding planting, bank treatments, and stabilization methods.

As discussed in the previous response, the SEIR identifies loss of natural edge salt marsh wetlands as a significant effect of the project. Mitigation Measure L.1 (pp. VI.50-VI.51), if adopted, would allow for restoration of wetland habitat and other natural-edge treatments that would be in keeping with the CAC Design Standards and Guidelines. To further clarify that nothing in the mitigation measure should limit the flexibility to require more natural approaches to the Channel edge treatments, the last sentence of Mitigation Measure L.1 (prior to “Guidelines for Implementation of a Salt Marsh Restoration Project”) has been revised as follows:

**Prepare and implement a salt marsh wetland habitat mitigation plan in accordance with the San Francisco District, U.S. Army Corps of Engineers Habitat Mitigation Planning Guidelines. Determine the details of the plan through the Section 404 permit process. Nothing in this mitigation measure is intended to constrain the flexibility needed to meet permitting agency requirements, or adjust to variability in field conditions, new information or technology, or other factors. Similarly, this condition is not intended to conflict with or constrain use of more natural alternative Channel edge treatments that are determined feasible and consistent with adopted Redevelopment Agency standards and guidelines applicable to Mission Bay as contained in Design for Development documents. Applies to Mission Bay North and Mission Bay South.**

## **Bird Displacement Due to Human Activities**

### ***Comments***

And there are 61 species of birds there. I don't think that's a minor wildlife. (*Phyllis Ayer, Wildlife Subcommittee, Sierra Club, and Audubon Society*)

One of the major flaws in the document is the implication that further degrading of the channel will have no significant impact on the environment. In fact, any loss of habitat is unacceptable. The birds cannot simply just go elsewhere, as this document states. There isn't enough “elsewhere” left in the Bay Area for the birds to go. If there were, they probably wouldn't be using this degraded channel in the first place. . . And especially given our location on the Pacific flyway, we have to consider not only our resident wildlife but also all of the migratory birds that require stopping and resting and feeding places to make it on the rest of their journey to other states and to other countries. It's our fair share of our international protection of wildlife. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

Mission Creek (China Basin Channel) provides a rich foraging habitat<sup>1</sup> for over sixty species of birds<sup>2</sup>. The most majestic, Great Egrets and Great Blue Herons, have wingspreads over six feet. However, the influx of people associated with the development may drive these great shorebirds from Mission Creek<sup>3</sup>. That would be a loss for the birds, and a great loss for the people who will live and work at Mission Bay.

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<sup>1</sup>Mission Creek provides a rich foraging habitat. "Because of their more exposed nature, these areas (other feeding areas in the Bay in the immediate vicinity of the Channel) do not provide the same quality of resting habitat that is sheltered from unusually high tides, storms and currents, as does China Basin Channel." (SEIR V.L.14)

<sup>2</sup>Many birds forage on Mission Creek. "Bird studies. . .documented the use of China Basin Channel by 61 bird species. . . The results of. . .studies are generally consistent in that bird census data indicate that a wide range of species is present. . ." (SEIR V.L.5 Wildlife)

<sup>3</sup>Influx of people may displace the shorebirds. "Human disturbance in the Channel area after build-out of the project could also result in displacement of water birds or mammals from China Basin Channel because of the addition of up to about 30,000 employees, about 11,000 residents, and other visitors in the Project Area, and resulting higher levels of human presence, litter, noise, pets and potential harassment of wildlife. . .Studies. . .demonstrate that harassment of wintering water birds by people and their pets can result in losses of feeding opportunities, leading to reproductive failure during the next breeding season." (SEIR V.L.14 Disruption of Aquatic Wildlife)

*(Robert B. Isaacson, President, Mission Creek Conservancy [letter and public hearing])*

The DEIR fails to take account of the importance and uniqueness of Mission Creek as a rare urban oasis for wildlife on San Francisco's densely developed eastern waterfront and thus to acknowledge that its destruction by development of the Project would be a significant environmental impact under CEQA requiring on-site mitigation. . .As we have shown, readily available and fully feasible mitigation measures could improve and enhance this rare resource rather than destroy it, as is proposed with the Project. Given its proximity to San Francisco neighborhoods and schools far from any comparable and accessible wetlands site, it is obvious that Mission Creek's loss as viable wetland habitat would constitute the significant loss of an important educational, recreational and open space resource that should be cherished and enhanced for San Francisco's children and adults alike, not denuded and harshly engineered. Under the CEQA Guidelines, a project will normally be considered to have a significant environmental impact if it would have a "substantial, demonstrable negative aesthetic effect" (Guidelines Appendix G(b)), which the replacement of a life-filled wetland environment with a sterile engineered channel certainly would; or if it would "[s]ubstantially diminish habitat for fish, wildlife, or plants" (App. G(t)), which, in the context of San Francisco, and particularly its east side, it would; or if it would "[c]onflict with established recreational, educational, . . . or scientific uses of the area" (App. G(w)), which, again, the destruction of this rare area long enjoyed and studied by birders, biologists, and others clearly would.

The DEIR arrives at the conclusion that the loss of the current birdlife (and other wildlife) at Mission Creek would not be a significant environmental impact by reference to the overall Bay Area avian population rather than to the importance of Mission Creek as a rare urban ecological resource. Thus, while the DEIR acknowledges that Mission Creek currently has pickleweed habitat, a type of wetland habitat with "high wildlife values" (DEIR V.L.3); provides "important fish habitat" (V.L.5.); provides resting and foraging habitat for both resident and migratory birds (V.L.6); and provides better resting habitat for waterfowl and shorebirds than any other habitat within two miles, it concludes that the destruction of that habitat and the near-complete displacement of current avian (and marine mammal) populations would not be a significant impact of the Project (V.L.14-15). The reasoning behind this is



that the habitat and wildlife populations at Mission Creek are relatively small compared to other sites in the Bay Area and, with respect to the birds in particular, that this is resting and foraging, not breeding, habitat, and they can move elsewhere. This analysis fails entirely to acknowledge this area's importance as one of the very few sites on the largely industrialized and now redeveloping eastern side of the City that still has a functioning wetlands ecosystem.

Knowledge of the regional setting is critical to the assessment of environmental impacts. *Special emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project.* 14 CCR § 15125(a) (emphasis added). . .

It is scarcely enough for the EIR simply to write off the biological resources of this area on the assumption that the wildlife will relocate to other areas. (Moreover, the DEIR presents no evidence to support the conclusion that the birds can move elsewhere without creating harmful competition for food and space and risking the avian diseases associated with overcrowding.) CEQA demands that the threatened loss of this area be fully and fairly examined in light of its actual nature as a rare biological, recreational, educational, scientific, and aesthetic resource set in a densely developed area of the City that the Project proposes to make even denser. It further demands that this loss, once properly acknowledged as significant, be mitigated in the manner outlined above. Mission Creek is a resource that should be enhanced for the enrichment and enjoyment of generations to come, not degraded without the least attention having been paid to its great value and uniqueness in the urban landscape. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

I have friends in the area of the Catellus Dev. . . in the Mission Creek area and have framed the development in a way to severely degrade the tidal environment so that birds will no longer rest & feed on Mission Creek. . . Please use your influence to see my friends can continue to enjoy the natural beauty of the area who live there. And when I'm there I can enjoy it also! (*Anne G. McDermott*)

On page V.L.5 the DEIR recognizes the “. . . **high numbers of grebes, cormorants, herons and certain species of diving ducks observed in the Channel** and surveys. . . indicate that **the Channel may provide important fish habitat.** . .” [commentor's emphasis]. Also on page V.L.14, the DEIR states that adjacent resting habitat areas are not as good as that of China Basin Channel because they do not provide the “same quality of resting habitat that is sheltered from unusually high tides, storms and currents as does the China Basin Channel. . .”

However, on page V.L.6 the DEIR then states that “from a regional wildlife management perspective, the Channel provides minimal support for wildlife. . .” This is clearly contradictory. If the Channel supports high numbers of waterbirds and is an “important fish habitat” how can it be declared an area that provides “minimal support”?

The DEIR apparently reaches this conclusion by stating that the only really important waterbird habitat is breeding habitat. Specifically, the DEIR states “[R]esting and foraging habitat is. . . less critical to water birds than nesting or breeding habitat. . . (V.L.6)”. This is an amazingly inaccurate conclusion. For a waterbird species to survive it needs feeding and resting habitat just as much as it needs breeding habitat. In fact, very few waterbirds nest in the Bay Area. Most waterbird species breed in the Arctic. Yet no one would call the San Francisco Bay Area one of little importance to waterbirds.

San Francisco Bay provides resting and feeding habitat to hundreds of thousands of migratory waterfowl and to over a million shorebirds and waders every year during the migratory season. If these migratory birds are deprived of these feeding and resting habitats, they will die just as quickly as they would if their breeding habitat were destroyed. Foraging and resting habitats are critical to the survival of migratory birds and are just as important factors as breeding and nesting. And, in fact, good resting habitat is one of the rarest habitats in the Bay. As the DEIR states, “[T]he open waters of the Bay. . .do not provide the same quality of resting habitat [as does China Basin Channel] that is sheltered from unusually high tides, storms, and currents.(V.L.14)” Thus the statement that “the channel provides minimal support for wildlife and is not capable of sustaining significant populations of the species observed because of the lack of suitable breeding habitat. . .(V.L.6)” is simply scientifically wrong.

Furthermore, Double-crested Cormorants do nest near China Basin Channel (China Basin Channel). They nest on the Bay Bridge and their use of China Basin Channel for foraging may play an important role in the survival of these birds and their young. The State Department of Fish and Game lists double-crested Cormorants as a Species of Special Concern and impacts to this species should be mitigated.

Thus, we believe that the DEIR should have concluded that China Basin Channel is an important habitat (“ . . .high numbers of grebes, cormorants, herons and certain species of diving ducks observed in the Channel and surveys. . .indicate that the Channel may provide important fish habitat. . .”). Because, then of the importance of this habitat, the DEIR should have concluded that impacts to this habitat require mitigation. The DEIR failed to do so. . .

Secondly, the DEIR clearly states that the increased presence of humans and pets around the Channel will lead to the displacement of the waterbird species (V.L.14). Yet the DEIR proposes no mitigation for this impact, we assume because the DEIR identified the area as lacking habitat value. We have demonstrated previously that that conclusion was erroneous. The China Basin Channel is indeed an important habitat and thus impacts to it must be mitigated. The DEIR needs to be rewritten so as to include mitigation proposals for the impacts of human disturbance. . .

The DEIR also fails to consider the cumulative impacts of the project on wildlife. The DEIR recognizes the general importance of wetland habitat. It recognizes that the project as proposed will mean the elimination of China Basin Channel as a viable habitat for avian species. It does not, however, analyze this impact on a cumulative basis other than to state that surrounding areas provide either (1) similar but less adequate habitat (see above) or, (2), similar habitat at Islais Creek.

It is well known, however, that most Bay habitats are already saturated with wildlife. If China Basin Channel habitat is destroyed for avian species, they cannot just move on to Islais Creek. There are already significant bird populations using the Islais Creek habitat. The destruction of China Basin Channel will simply increase the competition for habitat in Islais Creek, not provide new habitat.

The DEIR does not analyze the cumulative impacts of other losses of sheltered waterbird resting habitat. It does not analyze the impact of the Bay Trail on those sheltered habitats. We believe that the Bay Trail may limit the habitat value of these sheltered areas because of increased human disturbance, thus leading to cumulative loss of habitat. The Bay Trail extends along over 100 miles of the Bay shoreline and is growing rapidly. Thus the combination of the loss of sheltered habitat due to



development, such as at Mission Bay, and to human disturbance, as a result of the Bay Trail and other public access projects, may have significant cumulative impacts.

Because the DEIR concludes that large numbers of waterbirds use China Basin Channel and that the project, as proposed, will make the China Basin Channel unsuitable as resting habitat for those waterbirds, and because we have demonstrated that such an impact is a significant impact, the DEIR thus needs to analyze and mitigate these cumulative impacts.

The mitigation proposed on page VI.50 is completely inadequate because it is vague and only addresses the wetland losses, ignoring the human disturbance impacts. Thus there is no proposed mitigation for the loss of feeding and resting habitat on a cumulative level.

The DEIR must be rewritten to include both the analysis of and the mitigation for these cumulative impacts. (*Arthur Feinstein, Executive Director, Golden Gate Audubon Society*)

Regarding the wildlife which currently uses Mission Creek Channel, we believe that the DEIR makes a number of unfounded assumptions regarding the impact of obliterating shorebird feeding habitat with riprap:

1) that there will be no mortality. How was it determined that a reduction in food supply would not risk mortality? Migratory birds need all the fat reserves they can get to successfully complete their migrations. Birds which nest elsewhere but forage in Mission Creek to feed their young need a bountiful supply to maximize nesting success.

2) that there would be no impact on Mission Creek because the birds could go elsewhere. Where would they go that isn't already being used to capacity?

3) that the habitat is not significant if birds do not nest there. Some birds do nest there, and wildlife survival depends on a lot more than just nesting sites.

The DEIR also minimizes the negative impact of encroaching development on wildlife in the channel. The previous Mission Bay EIR clearly stated that the encroaching development would have a negative impact which should be mitigated by the creation of wetlands habitat nearby. Why would this conclusion be any less valid for the current plan, which calls for even denser development near the channel? Even if the wetlands and mudflats are not impaired, the DEIR should identify mitigation for the disturbance caused by the intensification of human activity. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

### **Response**

Many comments discuss the importance of the China Basin Channel habitats for resting and foraging birds, citing the importance of birds and the fact that the observed occurrence of 61 species of birds is significant. Others criticize the SEIR for failing to take into account that China Basin Channel provides a unique and important location for waterbirds on San Francisco's densely developed waterfront, and that its loss as habitat would be significant for the birds and the humans who enjoy them. The SEIR's assertion that displacement of wildlife from the Channel would not be likely to result in mortality

because birds could move elsewhere was questioned. Comments point out that similar habitats nearby, such as Islais Creek, may already be occupied to the limit of the carrying capacity. Also, the SEIR's explanation that breeding and nesting habitat was more critical to waterbirds than foraging and resting habitat was disputed and the importance of foraging habitat for wintering waterbirds to complete their migration was emphasized. It was also pointed out that breeding habitat does exist in the vicinity of the project, specifically that the Bay Bridge provides breeding habitat for double-crested cormorants, a State Department of Fish and Game Species of Special Concern.

The finding that from a regional standpoint the Channel provides only limited support for wildlife populations was also questioned and described as contradictory to other findings of the SEIR on the value of wetland and fishery habitats in the Channel. One comment asks why the conclusion of less-than-significant impacts differed from that of the 1990 FEIR, and several comments requested that mitigation be provided for the human disturbance and displacement of waterbirds resulting from the project. The SEIR was also criticized for failing to account for the cumulative impact of human disturbance in the Bay Area, which could result in the unavailability of similar habitats for wildlife. Some comments confused the SEIR's findings on this issue with its findings on the loss of wetlands. It should be clarified that the SEIR found that the loss of wetlands and mudflats resulting from the proposed edge treatments would be significant and would require mitigation. The potential displacement of birds from the Channel is not considered significant for the reasons discussed below.

The issue of increased human activity and potential displacement of birds was analyzed in detail in the SEIR, with literature reviews and agency consultations regarding impacts of human occurrence on wintering and migrating waterbirds, and extensive surveys of the Channel by qualified wildlife biologists to identify the diversity and density of bird use and observe foraging and resting behavior as affected by construction of the I-280 overpass and human presence (pp. V.L.14-V.L.15 in Section V.L, China Basin Channel Vegetation and Wildlife). The use of the Channel by 61 observed species of birds was documented using data from winter surveys provided by the Mission Creek Conservancy (independently verified by EIP Associates) as well as data from extensive summer surveys conducted by EIP wildlife biologists.

As discussed on p. V.L.5, these data show that the diversity of bird species using the Channel is relatively high, but that the numbers of individuals of most species in the Channel are low. The bird species observed resting in large numbers in the Channel during winter storm periods (greater scaup, surf scoter, sanderling, and mew gull) are winter residents in the Bay Area, feeding mostly on mollusks, crustaceans, and aquatic insects. Western and glaucous winged gulls, also observed in large numbers in the Channel during the winter, may occur throughout the Bay Area year-round. These gulls are primarily scavengers and carrion feeders, although they may feed on mussels, clams, and



small vertebrates. The small area of the Channel and the relatively low diversity and biomass of benthic invertebrates (as discussed on pp. VL.4-V.L.6) does not allow for the abundance of forage that would be required for the Channel to be a significant contributor to the health and viability of large numbers of migratory waterbirds on the Pacific Flyway, hence the statement that the resources of the Channel are limited from a regional viewpoint.

The SEIR does not minimize the significance of San Francisco Bay mudflats, salt marshes, and fisheries to the survival of migratory birds. In fact, the SEIR points out that human disturbance of foraging wintering waterbirds can lead to reproductive failure by the birds during the next breeding season (p. V.L.14). The SEIR concludes, however, that the limited resources of the Channel do not provide a critical component of the forage requirements of migrating and wintering waterbirds of the Pacific Flyway and San Francisco Bay Region. The primary foraging resource that the Channel does provide is for fish-eating resident birds during brief periods when schooling fish are in the Channel, but this is a phenomenon that is prevalent in aquatic habitats in the vicinity and is not unique to the Channel. Temporary displacement from portions of the Channel (the portion nearest the Bay is wide enough that the interior of the mouth is substantially distant from any landward human activity) would not be expected to result in mortality or any significant impacts on waterbird populations.

Regarding the occurrence of nesting habitat in the Channel, under current conditions, there is no nesting habitat in the Channel for waterbirds except possibly for common gull species, such as western gulls, adapted to urban environments./4/ The second sentence at the top of p. V.L.6 has been revised as follows:

**Relatively high counts of migratory waterfowl and shorebirds indicate the Channel provides resting and foraging habitat (but no breeding or nesting habitat except possibly for common gulls adapted to urban environments) during spring and fall migrations.**

Hérons, egrets, and cormorants nest in communal rookeries elsewhere in the Bay Area, and migratory waterbirds (as one comment correctly noted) primarily nest in Canada and the Arctic. Although another comment is correct in stating that double-crested cormorants nest on the Bay Bridge, that is not close enough to the Project Area for any project activities to affect their nesting habitat or nesting behavior.

The value of the Channel as sheltered resting habitat during winter storms was also discussed in detail on p. V.L.6, and the impact of disturbance from humans and their pets resulting from the project was analyzed on pp. V.L.14-V.L.15. The analysis was conducted in the context of the following factors: existing levels of human disturbance, adaptability of wildlife to disturbance, occurrence of resting

habitat with similar qualities in the vicinity, and the patterns of human occupation in relationship to the need for sheltered resting habitat.

The adaptability of waterbirds to existing levels of human disturbance was considered in the impact assessment. Large numbers of waterbirds have frequently been observed in the Bay area by EIP biologists and others next to heavily used airport runways and highways, such as the previously cited occurrence of nesting cormorants on the Bay Bridge. All of the birds observed by EIP biologists listed in Appendix Table K.2 were resting in the Channel during periods of varying degrees of human disturbance, and were often found in close proximity to humans. During the EIP surveys, seismic retrofit and construction of the I-280 ramps at King Street were ongoing, with intensive levels of noise, human presence, and heavy- equipment activity. Waterbirds and marine mammals in the vicinity of this construction activity were observed to be resting and feeding with little or no apparent concern. Similarly, waterbirds were observed apparently undisturbed in proximity to people congregating on the shoreline, near boats traversing the Channel, and in proximity to the daily activities of people living in houseboats on the Channel. Given the long period during which build-out of the Mission Bay project would occur, it appears likely that wildlife using the Channel would have time to adapt to increasing levels of human disturbance.

The SEIR, however, took a conservative approach to the issue and analyzed the effects in the unlikely event that human activities caused by the project resulted in temporary displacement of the wildlife resting in the Channel. It concluded that other habitats existed nearby (within range of the wildlife using the Channel) that provide similar qualities of sheltered resting habitat, and focused on Islais Channel as an example. The analysis does recognize the cumulative losses of important habitats in the Bay area (p. V.L.10 refers to the “minimal remaining extent and quality of wetlands due to past losses”). This is taken into account when analyzing the availability of nearby habitats. Resting habitat, unlike foraging habitat, is dependent on the space available in a given area, not productivity. Even taking into account the well-documented negative effects from stress and disease resulting from forced overcrowding of waterbirds, resting habitat is not in short supply, and there is still available space that is sheltered from storms for resting waterbirds. Islais Creek is one nearby example, but other sheltered resting areas exist, such as South Basin, Central Basin, and India Basin.

Substantially more resting areas occur regionally, within range of migratory waterbirds, such as the abandoned Cargill salt ponds in Sonoma County south of Highway 37 and in Hayward south of Highway 92, and channels and sloughs of Bair Island near Redwood City (all of which are now permanently preserved as open space and in various phases of habitat restoration). See also the discussion under “Cumulative Losses” on pp. XII.428-XII.429. With regards to the cumulative impact of human disturbance resulting from the Bay Trail, it should be noted that the EIR (1989) for the Bay



Trail identified mitigation measures to lessen the impacts on wildlife from human disturbance, and Bay Trail planning policies require measures such as no additional lighting, no dogs, and other restrictions to accommodate wildlife values./5/ Furthermore, the Bay Trail would not go around the shoreline of the Channel; rather, it would cross the Channel at Third Street, a major arterial that already experiences high levels of car and foot traffic.

Another factor regarding the potential displacement of wildlife from resting habitat that was considered during the SEIR significance evaluation process, but not discussed in the SEIR, is the patterns of human occupation during times when sheltered resting habitat is most needed. Waterbirds and shorebirds in the project vicinity, the vast majority of which forage and rest primarily in the Bay itself or adjacent mudflats, would most likely require the sheltered resting habitats of the Channel during intensive winter storms. The high winds, intense wave activity, and forceful currents during storms can drive waterbirds into seeking refuge in sheltered locations. However, the same factors and heavy rainfall during such events would tend to minimize human activity along the Channel shoreline. Most people will seek refuge themselves from intense storms by staying indoors or in sheltered locations, thus the Channel would remain available as a refuge of resting habitat for waterbirds with minimal disturbance by human activities during those times.

In summary, for the reasons discussed above, the SEIR concluded that displacement of wildlife because of human activities associated with the project was not a significant impact resulting from the project, in accordance with the CEQA criteria that an impact is significant if it causes “. . . a fish or wildlife population to drop below self-sustaining levels” or “has the potential to substantially reduce the habitat of a fish or wildlife species.” Because the breeding populations of waterbird species using the Channel encompass thousands of individual birds spread widely over the Bay Area or over the entire Pacific Flyway, the displacement and temporary reduction of habitat for the relatively few birds of a population in the Channel would not be considered substantial and would not reduce the population to levels below that of sustainability. CEQA does not require mitigation measures for impacts considered less than significant. This conclusion does not differ from that of the 1990 FEIR, which stated that “the small number of displaced birds, notably herons and egrets, would likely continue to forage in other parts of the Bay Area.” The 1990 FEIR went on to state that “. . . there is no evidence that this decline would endanger the total population of herons or egrets in the Bay Area” (p. VI.M.9). New wetlands were incorporated into the approved 1990 project, but wetlands were not required as mitigation for any impacts, including disturbance by humans which was considered a less-than-significant impact. With the project, the Channel would remain as habitat in the densely populated San Francisco Bayshore that would be available for educational and recreational purposes, hence there would be no significant “aesthetic or sociological” impact.

## Perching Sites and Other Measures to Improve Channel Habitats

### Comments

[T]he Mission Creek China Basin Channel is not within the project boundaries and is not being improved as wildlife habitat. (*Dick Millet, Potrero Hill Boosters and Merchants Association*)

We're asking that the Mission Bay habitat be enhanced, not degraded, which is in accord with the Citizens Advisory Committee's guidelines. And specifically that wetland biologists and hydrologists be engaged by Catellus to provide the habitat plan that would be reviewed and approved by the Citizens Advisory Committee. (*Robert B. Isaacson, President, Mission Creek Conservancy*)

Alternative treatments that are hospitable to the shorebirds can be done at minimal cost and with no loss of housing or any other use in the development program.

There should be no rip-rap, the shoreline could be stabilized by using a biotechnical approach.

There should be perching piles, concrete piles can be placed in lieu of the present deteriorated timber piles to give the shorebirds roosting places.

There should be development of small wetlands on the north and south shores, development of small islands will increase the shoreline and give the foraging birds places protected from harassment by people and animals. The Mission Creek Conservancy has specific plans for such mini-wetlands.

The channel habitat should be maintained without alteration, the value of the Channel habitat as a sheltered resting place for migratory water birds and marine mammals could be adversely affected by construction and operation of this project if Catellus is allowed to engineer the channel. (*Marian E. Fricano*)

Mission Creek habitat should be enhanced. A Habitat Enhancement Plan should be required as mitigation to offset the negative impacts of the encroaching development, with the following specifics:

- a. That a Wetland Biologist and a Hydrologist be engaged by Catellus to formulate the Habitat Enhancement Plan, with participation by a Mission Creek Conservancy representative.
- b. That the Habitat Enhancement Plan follow the Design Standards and Guidelines adopted by the Mission Bay Citizens Advisory Committee (CAC)<sup>4</sup>.
- [c]. That the Plan be subject to approval by the Mission Bay Citizens Advisory Committee in concert with approvals of the various resource agencies<sup>6</sup>.
- [d]. That implementation of the approved Habitat Enhancement Plan be included in Catellus' review/approval process with City Agencies.

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<sup>4</sup>CAC Standards and Guidelines require enhancement of the tidal ecology:

"respect and enhance the natural environment and wildlife potential of the area. . . in the selection of landscape and channel edge materials" [p 10]

"stabilize the water's edge with natural materials and vegetation at appropriate water elevations, sensitive to the tidal ecology of the Channel"



“maintain gently sloping banks in the intertidal area to encourage foraging shorebirds”

“provide perch pilings in the Channel to attract foraging shorebirds” [pp 75,6]

<sup>6</sup>Resource Agencies regulating shoreline treatment: SF Bay Conservation and Development Commission, California Department of Fish and Game, US Army Corps of Engineers and US Fish and Wildlife Service.

*(Robert B. Isaacson, President, Mission Creek Conservancy)*

Please follow the spirit of the Mission Bay Citizens Advisory Committee and enhance the wildlife habitat in the channel area by:

1. No rip-rapping: use ecology friendly coconut fiber rolls instead;
2. Adding perching piles: replace wooden piles with concrete piles so birds have places to dry their wings; and
3. Developing small wetlands on the north and south banks, especially islands that will give birds space away from people and pets.

*(Eric J. Ganther)*

Mitigation:

1. Require the Developer to submit a Wetland Enhancement Plan for approval by the CAC (or SFRAC).
2. Wetland Enhancement Plan is to comply with the Design Standards and Guidelines adopted Dec '97 as follows:
  - “respect and enhance the natural environment and wildlife potential of the area. . .in the selection of landscape and channel edge materials [p. 10]
  - “stabilize the water’s edge with natural materials and vegetation at appropriate water elevations, sensitive to the tidal ecology of the Channel
  - “provide perch pilings in the Channel to attract foraging shorebirds
  - “maintain gently sloping banks in the intertidal area to encourage foraging shorebirds” [pp.75, 6]
3. Wetland Enhancement Plan is to be developed by Wetland biologist(s) and Hydrologist(s) approved by CAC, in concert with Catellus’ other consultants and representatives from Mission Creek Conservancy.
4. Wetland Enhancement Plan is to include consideration of mitigation of toxic seepage or storm/sanitary sewage overflows by bioremediation through the wetland.
5. Prohibit any planned treatment such as rip-rap, removal of piles or wetland plantings or any other actions that would degrade the present wetland value of Mission Creek until the Wetland Enhancement Plan is approved.
6. Include mechanisms to assure implementation of the Wetland Enhancement Plan.

*(Robert B. Isaacson, President, Mission Creek Conservancy)*

The [Design Standards and] Guidelines specifically provide that Mission Bay development should be designed so as to. . . “[p]rovide perch pilings in the Channel to attract foraging shore birds” (*id.*); “[p]rovide softscape planting along Channel edge to elevation of mean low tide with vegetation compatible with each tidal zone” (p. 76); and “[m]aintain gently sloping banks in the intertidal area to encourage foraging shore birds” (*id.*). Despite this clear direction in the Design Standards and Guidelines, Catellus has framed its development plans to *degrade* the tidal environment of Mission Creek severely, so that the birds would no longer rest and feed on Mission Creek. . .Existing mud banks on which the birds forage would be covered with stone. The project proposes the hard rip-rap system (a layer of stones) extending upslope from the mean low water line. DEIR V.L.7. Moreover,

all of the intertidal pilings on which the birds perch would be removed. DEIR V.L.13. In sum, the Project would degrade the Mission Creek channel habitat to the extent that most of the birds that currently use the area (as well as harbor seals and sea lions) would be permanently displaced, and all that would remain of the existing small oasis for wildlife in the heart of our city would be a biologically impoverished engineered channel. DEIR V.L.14. . .

Such measures are readily available. Alternative treatments of Mission Creek and its banks hospitable to the existing avian population can be done at minimal cost and with no loss of housing or any other use in the Project. Such treatments would enhance the existing habitat and increase the chances of the birds continuing here in spite of the large numbers of people the Project would bring to the area. These treatments would be within designated Open Space areas and would not encroach on other uses. They would cause minimal reduction in areas accessible to people while significantly enhancing the quality of open space for people's use and enjoyment. These treatments include: (1) eliminating channel bank rip-rap, instead stabilizing the shoreline using a biotechnical approach such as installing coconut-fiber rolls (which the DEIR, VI.51, admits is feasible); (2) replacing the present deteriorated timber piles with concrete piles to maintain roosting places; and (3) developing small wetlands along the north and south shores, small islands of vegetation that would increase the shoreline and give the foraging birds places protected from harassment by people and animals. The Mission Creek Conservancy has plans for such mini-wetlands. . .

To ensure that these and other appropriate mitigations are undertaken for the Mission Creek habitat, MCC proposes that a Habitat Enhancement Plan be required to offset the negative impacts of the encroaching Project development, with the following specific features: (1) a wetland biologist and a hydrologist would be engaged by Catellus to formulate the Habitat Enhancement Plan, with participation by a Mission Creek Conservancy representative; (2) the Habitat Enhancement Plan would follow the Design Standards and Guidelines adopted by CAC; (3) the Plan would be subject to approval by the CAC in concert with approvals of the various resource agencies; and (4) the approved Habitat Enhancement Plan would be included in Catellus' specific applications to relevant City agencies to ensure its inclusion as a binding condition of approval and thus its proper implementation.

Given the clear requirements of the CAC's Design Standards and Guidelines specific to the Project, the 1990 Mission Bay Plan, and the City's Sustainability Plan with regard to preserving natural environments and biodiversity across the City and at Mission Creek in particular, such mitigation measures, aimed at preserving the existing bird life and other biological resources at Mission Creek (and not only at some theoretical off-site mitigation area) must be presented for public review and adopted before CEQA will have been adequately observed as a proper legal basis for Project approval. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

While Mission Creek itself is not part of the project, it is a significant feature of the project. I would expect most to agree that the creek will be more inviting with less sewage and storm overflow, and more wildlife. The wildlife on the creek is a unique feature, and should be enhanced, not ignored.

II.31 Summary. "The addition of up to 30,000 employees and 11,000 residents after build-out would result in higher levels of human activity, litter, noise, pets, and potential harassment of wildlife." We agree with this finding; we suggest that it be mitigated rather than ignored. Suggestions for keeping wildlife in the channel and improving the habitat include creating a stormwater wetlands; planting fruit, nut and berry producing trees and shrubs that provide food for the birds; maintaining the soft edge on



the Channel rather than riprapping the edge; and keeping the piles in the Channel in place to allow the Channel to act as a buffer between the birds and the people on shore. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

The Proposal Needs To Be Altered To Assure That the Habitat Values Of Mission Creek Are Maintained And Improved. BayKeeper concurs in and incorporates by reference the comments of the Mission Creek Conservancy regarding the critical need to mitigate the project's adverse impacts on waterfowl and other wildlife that already use Mission Creek. The project should seek to improve upon what is currently there by eliminating all plans to rip rap the Mission Creek shoreline, by restoring wetland values to the shoreline areas there, maintaining perches and generally maximizing the aesthetic and recreational values which everyone using open space along a functioning wetland and shallow water Bay ecosystem would then enjoy. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

Many comments state that the proposed project would not improve or enhance the Channel as habitat, and call for improvement measures to enhance habitat values. These include adding concrete pilings to provide perches for birds, planting trees and shrubs that provide food for birds, developing small wetlands on the north and south Channel shores, maintaining the Channel without alteration, eliminating rip-rap and using biotechnical methods for stabilization, and engaging a wetland biologist and hydrologist to formulate a habitat enhancement plan subject to approval of the Citizens Advisory Committee.

This category overlaps with comments about mitigation (many comments present these ideas as mitigation; see also the responses in "Mitigation Measures" on pp. XII.426-XII.428), and with comments related to losses of wetland and mudflat habitat, as well as the importance of the Channel for birds. Creating small wetlands on both edges of the Channel could be viewed as mitigation for loss of salt marsh and mudflat habitat, if the wetlands were created in a manner that replaced the habitat values and extent being lost. This suggestion could be accommodated within existing Mitigation Measure L.1 (p. VI.50 in Chapter VI, Mitigation Measures) for loss of wetland habitat.

Other suggestions are not really mitigation measures, but details on procedures for preparing and implementing a plan to enhance habitat values ("retain a wetland biologist and hydrologist," "that the Habitat Plan follow the Design Standards and Guidelines adopted by the Mission Bay Citizens Advisory Committee," etc.). These suggestions would be relevant to the project approval and permit process for the channel edge open spaces. Catellus is evaluating enhancement alternatives and has had discussions with the Mission Creek Conservancy over possible wetland restoration and enhancement measures. These studies and dialogue may continue through the design review process and as part of the public interest review during the Section 404 permit process.

Another group of these habitat improvement suggestions addresses impacts not considered significant in the SEIR analysis. The removal of old pilings was not considered significant because there is no evidence that a shortage of perching sites for waterbirds is a limiting factor to their sustainability, or that removal of perching sites would “substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community” (CEQA Section 15065). Furthermore, birds would find other places to perch if the pilings were removed, such as bridges, moored boats, promontories (when not used by people), or other objects near the water. The planting of trees and shrubs to provide food for birds would also be a measure that would improve habitat values, but is not necessary to mitigate significant environmental impacts. The Project Area was not considered, in the Initial Study, pp. A.47-A.48, to provide significant resources for the upland species that would benefit from such plantings. Nevertheless, the suggestions in the comments to replace old pilings with new concrete pilings (as long as this was considered during the permit process and the pilings were located so as not to hinder navigation or create safety hazards), and to plant food-bearing trees and shrubs, would be enhancements for the Channel habitats, and could be considered as improvement measures by decision-makers.

## **Mitigation Measures**

### ***Comments***

The loss of salt marsh wetland habitat is a significant impact, and should be mitigated on-site, not at some theoretical off-site mitigation area. (*Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee*)

Because, then of the importance of this habitat, the DEIR should have concluded that impacts to this habitat require mitigation. The DEIR failed to do so and thus the DEIR needs to be rewritten with appropriate mitigation for impacts to wildlife that use China Basin Channel habitat.

This mitigation needs to take two forms. One is mitigation for impacts to wetlands. The second is mitigation for impacts to avian species due to human disturbance (V.L.14).

While the DEIR does consider and propose mitigation for wetland impacts the discussion of this wetland mitigation is inadequate. The discussion should first consider the ability of the project to avoid all impacts to wetland, as is required by the Clean Water Act's 404(b)(1) guidelines. The DEIR is negligent in not presenting the 404(b)(1) guidelines as a constraint on the project.

We believe that this project can take place without any existing wetland habitat being impacted and ask that the project be redesigned to avoid all wetland impacts.

The DEIR assumes there will be wetland impacts (V.L.10) but its mitigation proposal for that impact (L.1) is so vague that it is meaningless. For example, there is no indication of where the mitigation will take place. Mitigation opportunities along the San Francisco shoreline are few, and if mitigation takes place outside San Francisco boundaries the wildlife impacted at Mission Bay will not receive the



benefits of the mitigation. Furthermore, the DEIR does not indicate the amount of mitigation, i.e. amount of wetland acres, which would be created. While it does state that the Army Corps usually requires as mitigation the creation of larger wetland areas than those impacted, this statement alone is too vague to allow the public to judge whether the mitigation ratio is adequate. Thus the DEIR needs to be more specific about mitigation location and the amount of mitigation that is proposed. . .

We suggest that such mitigation consist, at a minimum, of sufficient buffers placed around China Basin Channel so as to allow the Channel to continue to provide suitable resting and foraging habitat, and that pilings be retained for water bird perches. The buffer need not always be of the same distance, but some parts of the shoreline should have at least a 75-150 foot buffer (see studies of Dr. Michael Jocelyn that indicate birds respond to human disturbance at distance ranging from 75-150 feet). (*Arthur Feinstein, Executive Director, Golden Gate Audubon Society*)

But we don't have to do that [destroy their food supply]. . . those losses can be avoided. But if there's going to be any loss of habitat along this channel, the mitigation plan should be specified, specified before the comment period closes so we can comment on the adequacy of the mitigation. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

The SEIR's failure to mitigate the proposed project's rip-rapping of Mission Creek channel . . . will eliminate critical foraging, resting and perching habitat for local waterfowl. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### **Response**

Some comments cite the SEIR's failure to mitigate the proposed rip-rapping and resulting habitat loss. Several comments criticize Mitigation Measure L.1 for loss of salt marsh in the DEIR as being too vague, and not specifying the location of the replacement wetland, indicating that they preferred it to be restored on-site. One comment mentions the SEIR's failure to cite the Clean Water Act Section 404 (b)(1) guidelines requiring an analysis of alternatives to avoid wetland impacts. Others suggest that a Habitat Enhancement Plan be required with features such as retaining a wetland hydrologist and biologist to explore opportunities for enhancement and restoration, a requirement that the plan follow the CAC Design Standards and Guidelines with the participation of the Mission Creek Conservancy, that the plan be subject to CAC approval, and that it be included as a binding condition of project approval (these are discussed under "Perching Sites and Other Measures to Improve Channel Habitats" on pp. XII.422-XII.426). Another comment recommends the provision of buffers around China Basin Channel to provide suitable foraging and resting habitat.

The impact of loss of salt marsh and mudflat habitat is addressed by Mitigation Measure L.1 (p. VI.50). See also the discussion under "Edge Treatments and Loss of Wetlands" on pp. XII.408-XII.410. The mitigation measure was purposely designed to not be too specific so as to constrain and potentially conflict with later recommendations and requirements of the regulatory agencies with jurisdiction during the Section 404 and BCDC permit processes. If the mitigation measure included

specific requirements, there could be future conflicts and policy inconsistencies if regulators disagreed or required different features. The permit process is a public process that allows input from concerned citizens as well as professional agency biologists who may have a unique perspective because of their involvement in wetland restoration efforts throughout the Bay Area. It is likely that accepted mitigation policies such as “in-kind, on-site” (requiring the mitigation wetland to provide similar values to the same wildlife populations impacted by the project) would require the habitat to be replaced onsite, but the regulators will ultimately tailor a mitigation plan that best meets the regulatory requirements and specifically addresses the impacts of the project. The Section 404 (b)(1) guidelines will play an integral part of the proceedings. Under current guidelines, the project sponsors will be required to demonstrate that no alternative treatments exist which are “less damaging to the aquatic environment” without consideration of mitigation. The Section 404 (b)(1) guidelines are discussed in detail on p. V.L.11.

Regarding the placement of buffers around the Channel, this suggested mitigation does not address an impact considered to be significant (see responses to comments on “Bird Displacement Due to Human Activities,” pp. XII.413-XII.421). Additionally, it should be noted that the proposed project does propose open space areas of between 60 feet and 250 feet on both sides of the Channel that would buffer the habitats from industrial, retail, and residential activities.

## **Cumulative Losses**

### ***Comments***

Wetlands should be expanded to natural historical levels and effect analysis and comparisons should be based on historical natural levels, not the degraded levels that exist now. (*Michael J. Paquet, Environmental Committee Chair, Surfrider Foundation, San Francisco Chapter*)

The DEIR fails entirely to examine the impacts of the loss of the wetlands habitat at Mission Creek considered cumulatively with the loss of wetlands elsewhere in the surrounding area.

CEQA requires that an EIR examine the effects of a proposed project that, even if insignificant when considered in isolation, rise to a level of significance when considered cumulatively with the impacts of other projects approved or reasonably foreseeable in the surrounding area. Pub.Res.C. § 21083(b); 14 CCR § 15130. Here, despite widespread knowledge that Bay wetlands are a dwindling resource in need of rigorous protection, and an open admission that the loss of any wetland habitat is significant (DEIR V.L.12), the DEIR contains no discussion whatsoever of the Project’s impacts on wetlands resources when considered cumulatively with other Bayfront projects potentially affecting wetlands in the area, including plans for the stadium and mall at Candlestick Point. Without this analysis, the EIR on Mission Bay is legally deficient. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)



Moreover, both Islais Creek and China Basin Channel constitute natural habitat areas consisting of wetlands and other habitat types that are becoming very rare in San Francisco. The fact that these areas of unique biological resources are quite probably toxic hot spots should be of extra concern. Again, any impact on them should be considered significant in the EIR. (*Kate White, Program Director, Urban Ecology, Inc.*)

#### ***Response***

One comment suggests that the SEIR analysis be based upon the historical natural levels of wetlands, not the degraded levels that exist now. Another suggested that the SEIR failed to assess the impacts of wetlands losses in China Basin Channel in the context of the cumulative historic losses of wetlands in the region.

The SEIR found that the loss of even a small amount of wetland area was significant given “the minimal remaining extent and quality of wetlands due to past losses” (p. V.L.10 of Section V.L, China Basin Channel Vegetation and Wildlife). One of the primary reasons that the loss of 0.14 acres of salt marsh wetland habitat was considered significant was that over 90% of the wetlands occurring historically in the Bay Area have been lost to development and agriculture in the past. Therefore, the SEIR analysis did take into account the historical natural levels and cumulative losses of wetlands in the San Francisco Bay Region. However, it should be noted that this is applicable in the context of background on the significance of impacts only, because CEQA requires that the project be assessed with regard to existing conditions at the time of project application.

Regarding current and future cumulative wetland losses in the Bay Area, the situation has changed entirely. Regulatory requirements have become more stringent, and enforcement and public awareness have intensified to the point where current regulatory policies make it virtually impossible for a project in the Bay Area to be approved unless it can demonstrate that wetland losses are either avoided or replaced with no net loss of wetland habitat. In fact, salt marsh wetland acreage in the highly urbanized vicinity of the City will be increasing over the next few years. The San Francisco International Airport (SFIA) is restoring 20 acres of salt marsh wetlands at Crissy Field, with completion in 1999./6/ From the spring to the fall of 1999, another 3.4 acres of salt marsh will be restored in India Basin by SFIA./7/ SFIA is also planning to restore 25 acres at Hunters Point, but the schedule for that project is uncertain./8/ The Port of San Francisco has recently put a salt marsh restoration plan out to bid for implementation; it expects that 5 acres of salt marsh will be restored on Pier 98 by the end of 1998./9/ The cumulative result of these efforts will be a net gain of more than 8 acres of salt marsh within the City of San Francisco by the end of 1999, with an additional 25 acres to follow.

## Common Species, Mudflats, and Invertebrates

### Comments

Your report in stating that urban landscaping and ruderal vegetation support only commonly widespread plant and animal species adapted to urbanized environments, and that on that basis those species need not be considered, betrays things all too common on [the] part of members of our own species, especially well-educated ones. And that is a prejudice in favor of the rare and of the remote and a complete ignorance of what, why, how and where other species are present among us, and the bearing of those species on the quality of our own lives and the possibilities for our species' future. . . Birds are especially important to us, and we need to pay attention to those 61 species of birds that are still at Mission Bay. We cannot preserve habitat except species by species. And we need to know that there are at least 250 species of Lepidoptera there among them, at least 20 species of butterflies. There are thousands of other species of invertebrates. E.O. Wilson has called invertebrates the little things that run the world. However, the end of invertebrates would end all of earth's essential processes, processes on which our species is entirely dependent. (*Barbara Deutsch*)

Also this document really downplays the significance of mud flats, the tidal mud flats. More and more people are beginning to understand that if we want these beautiful birds, the herons and the egrets and [curlews] and sandpipers, and all of those critters, we have to preserve the mud flats. That's where they eat. That's the only place that most of them eat. They poke their little nose down in the mud and they bring up those little invertebrate morsels. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

### Response

This first comment suggests that the SEIR is prejudiced in favor of "the rare and remote" because of the conclusion that the vegetation existing on the site supports only common and widespread species. The comment also suggests that the 61 species of birds on the site need to be considered, that 250 species of Lepidoptera (butterflies and moths) are ignored, and stresses the importance of invertebrates to the earth's essential processes.

The reference to the common and widespread nature of certain urbanized species is not due to any prejudice in favor of rare species, but is provided because CEQA states that a Lead Agency shall find that a project may have a significant impact if it has the potential to reduce the number or restrict the range of a rare or endangered plant or animal./10/ The SEIR reference also responds to other CEQA significance criteria: substantial reduction of the habitat of a fish or wildlife species, a fish or wildlife population dropping below self-sustaining levels, or elimination of a plant or animal community. Thus the SEIR portrays the urban-adapted plants and wildlife of the Project Area as common and widespread to demonstrate that the site does not provide any unique resources critical to the survival of those species' populations or communities because they are ubiquitous, and the urban habitats that support



them are in plentiful supply. A detailed discussion on common species of invertebrates, fish, and birds and the effects of the project on them is presented in the SEIR on pp. V.L.4-V.L.6 and V.L.10-V.L.15.

There is no discussion of the 250 species of Lepidoptera and the 20 species of butterflies mentioned by the comment because the Project Area does not provide enough of the necessary nectar and larval food plants to make lepidopterans a significant component of the Project Area's fauna. The value of invertebrates cited by both comments is addressed in the SEIR. Invertebrates are of vital importance to the earth's food web, and make many other contributions to a healthy ecosystem. The SEIR provides a detailed discussion of the benthic invertebrates of the area on pp. V.L.4-V.L.5. The value of mudflats as a forage resource for birds feeding on benthic invertebrates is presented, with the conclusions that the mudflats near the mouth of the Channel support the highest diversity and density of invertebrates, while the interior stretches of the Channel show signs of more degradation because of past contamination. The mouth of the Channel, where foraging values are highest, will experience the lowest level of impact from the project; no rip-rap is proposed there, and the distance from congregations of human activity on shore is the greatest. Furthermore, the mitigation proposed for loss of wetlands would result in increased productivity for the benefit of the benthic invertebrates and the foraging waterbirds, because of increased plant biomass, vegetative structural diversity, and organic matter.

## **Wetland Impacts**

### ***Comments***

I think it's critical and I think the testimony is quite clear and it's obvious from the situation that different treatment of the wetlands does not require us to reduce the size of this project. It does not require us to reduce the number of units or the size of the development. It really ought to . . . receive greater attention than it has in this EIR. . . [T]he prior EIR of 1990 identified this as a critical issue that required mitigation. And it would seem to me to be rather short-sighted of us at this point to skip over that prior conclusion and say somehow that that's been obviated by something that's happened in between, which it hasn't. So I hope that we can take a more serious look at this question about what to do about the habitat, how to treat it and what kind of mitigation matters we can take to preserve the habitat and perhaps to enhance it. (*Commissioner Dennis Antenore, Planning Commission*)

The wetlands issue, I think, is also very important. I'd like to see that fleshed out more with an explanation as to why there aren't going to be habitat restoration efforts. I thought the 1990 report was prepared to include it. (*Commissioner Richard H. Hills, Planning Commission*)

### ***Response***

The first comment is correct in stating that a different edge treatment for China Basin Channel that results in less wetland loss would not necessarily require a reduction in size or density of the project.

This issue was addressed in detail in the SEIR on pp. V.L.7-V.L.12. Both comments are also referred to the response under "Edge Treatments and Loss of Wetlands," on pp. XII.408-XII.410, Mitigation Measure L.1 (p. VI.50), and the response under "Mitigation Measures," on pp. XII.426-XII.428. The SEIR did identify this as a significant impact that requires mitigation (in the form of habitat restoration), as did the 1990 FEIR.

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NOTES: Vegetation and Wildlife

1. San Francisco Redevelopment Agency, *Design Standards and Guidelines, Mission Bay*, Draft C, prepared by Catellus Development Corporation; as adopted by the Mission Bay Citizen Advisory Committee on December 11, 1997, revised March 30, 1998.
2. San Francisco Redevelopment Agency, *Design Standards and Guidelines, Mission Bay*, Draft C, prepared by Catellus Development Corporation; as adopted by the Mission Bay Citizen Advisory Committee on December 11, 1997, revised March 30, 1998, p. 75.
3. San Francisco Redevelopment Agency, *Design Standards and Guidelines, Mission Bay*, Draft C, prepared by Catellus Development Corporation; as adopted by the Mission Bay Citizen Advisory Committee on December 11, 1997, revised March 30, 1998, p. 76.
4. Human disturbance impacts on nesting gulls would not be likely to result in nest abandonment and would not be considered significant because gulls are known to easily adapt to human activity and urban nesting habitat for gulls is common, widespread, and readily available.
5. Niko Letunic, Bay Trail Planner, Association of Bay Area Governments, personal communication with EIP Associates, June 25, 1998.
6. Lyn Calerdine, Assistant Deputy Director, Planning and Environmental Affairs, San Francisco International Airport, personal communication with EIP, June 24, 1998.
7. Lyn Calerdine, Assistant Deputy Director, Planning and Environmental Affairs, San Francisco International Airport, personal communication with EIP, June 24, 1998.
8. Lyn Calerdine, Assistant Deputy Director, Planning and Environmental Affairs, San Francisco International Airport, personal communication with EIP Associates, June 24, 1998.
9. Carol Bach, Project Manager, Port of San Francisco, personal communication with EIP Associates, June 24, 1998.
10. State CEQA Guidelines, Section 15065(a).



## COMMUNITY SERVICES AND UTILITIES

### *Comment*

Our concern is to make sure this newest community has affordable housing, home ownership as well as schools, parks, and police and fire station. (*Victoria Winston, Bay Area Organizing Committee and St. Dominic's Parish*)

### *Response*

The comment raises concerns that the proposed project provide affordable housing and various community services. Affordable housing is discussed above, under "Proposed Mission Bay Affordable Housing Program," in Business Activity, Employment, Housing, and Population on pp. XII.57-XII.65. The demand for school facilities is discussed on pp. V.M.29-V.M.32 of Section V.M, Community Services and Utilities. As noted there, a 2.2-acre site for a public school is included in the project. The trigger for transfer of the school site is in Measure M.1, on p. VI.52. The San Francisco Unified School District will determine whether and when to design and construct a school facility in the Project Area. The project includes about 47 acres of public open space; the expected locations of various parks are shown on Figure V.M.3, on p. V.M.24. Property adjacent to the existing, closed fire station on Third Street at Mission Rock Street is proposed to be dedicated to the City to provide space for a combined police/fire station, and Catellus would contribute a portion of the funding toward construction of the station (see pp. V.M.6 and V.M.10).

## Open Space

### Quantity of Open Space in Redevelopment Plans

### *Comments*

We need to go further in terms of open space. . .than what you see before you today. (*Jon Rainwater, San Francisco League of Conservation Voters*)

At this time, the primary concern of the Recreation and Park Department with respect to the proposed Mission Bay Development is the proportion of population density (related to both residential and nonresidential uses) to open space. Under the California Environmental Quality Act (CEQA), a project could potentially have a significant effect on the environment if it will conflict with adopted environmental plans and goals of the community where it is located, induce substantial growth or concentration of population, and conflict with established recreational uses of the area.

The Recreation and Open Space Element of the City's General Plan describes the limited opportunities to acquire new park land and develop much needed recreation facilities due to the scarcity and high cost of vacant land. Objective 2 of the element contains the following policy: *Provide an adequate total quantity and equitable distribution of public open spaces throughout the City.* The discussion following the policy describes the need to provide enough public open space in total to serve the City's

population and to provide an evenly distributed system of open space throughout the city so that people do not have to travel too far to reach parks and recreation facilities. . .

According to the 1990 census, there are approximately 305,584 households in San Francisco and approximately 5,591 acres of public parks and open space. Therefore, the proportion of open space per residential population is approximately 797 square feet per household. Even without the Presidio, the proportion would still be approximately 502 square feet per household. Under the proposed Mission Bay Development, the proportion of open space per household would be approximately 336 square feet, substantially below the city's average. This lack of open space will place an extraordinary burden on the parks in surrounding neighborhoods (Potrero Hill, South of Market). (*Joel B. Robinson, Acting General Manager, San Francisco Recreation and Park Department*)

The DEIR fails to acknowledge that the Project does not provide sufficient open space consistent with the requirements of the San Francisco General Plan.

The DEIR incorrectly states that "Quantity of open space per resident population is not addressed in the Recreation and Open Space Element" of the San Francisco General Plan. DEIR V.M.21. However, Policy 1 of that element of the General Plan explicitly states that the National Park and Recreation Association ("NPRA") recommends 10 acres of open space per thousand population in cities. Policy 1 reveals that, across the City, we had only slightly more than half that recommended level, 5.5 acres per thousand population, at the time this element of the General Plan was prepared. While acknowledging that existing development patterns, population density, and small land mass preclude San Francisco's achieving the NPRA 10-acre-per-thousand standard, Policy 1 expressly establishes the policy of *increasing* "the per capita supply of public open space within the City" to the extent it reasonably can. In other words, when given the opportunity, as it is with a major development like Mission Bay, it is the City's official General Plan policy to provide public open space in excess of 5.5 acres per thousand, in order to increase the City's overall per capita supply of open space. That ample open space is a necessary component of a development -- much of it residential -- with the proposed density of Mission Bay is beyond serious question.

However, as noted, the DEIR wrongly denies that the General Plan addresses the issue of per capita provision of open space and thus fails entirely to explore or seek mitigation for the Project's failure to provide anywhere near the existing 5.5 acres per thousand of open space, let alone increase the City's per capita open space as required by Policy 1. The DEIR reveals that the Mission Bay Project area is expected to house some 10,855 residents. DEIR V.C.33. The Project will provide some 47 acres of open space in total. DEIR V.M.22. This works out to 4.3 acres of open space per thousand population. The Project area would also employ over 28,000 more people than currently work in the area (DEIR V.C.23), making the daytime per capita open space per thousand population far lower, even after taking into account those who would both live and work in the area. The open space provided by the Project is patently inconsistent with Policy 1 of the City's Recreation and Open Space Element. The DEIR's failure to reveal, evaluate, and mitigate this clear inconsistency with established General Plan policy as a significant Project impact is a violation of CEQA. CEQA Guidelines, Appendix G(a).

To give a fair and accurate description of the impacts of the Mission Bay Project on open space in San Francisco, the EIR must provide a breakdown showing the quantity and location of open space in each Project area. . . (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)



## Open Space

III.15 Project Description. "Approximately 47 acres of public open space would be provided as part of the project."

With a projected population of 11,000, the City's open space currently averages 5.5 acres per 1000, about half of the recommended state average. This project creates a deficit of open space that is contrary to our City's General Plan. If additional acreage in the project area cannot be converted to open space, we would recommend that the project area be expanded to include the Port-owned parcel that was slated to become wetlands in the last Mission Bay plan. (*Jennifer Clary, Mary Anne Miller, Norm Rolfe, San Francisco Tomorrow Mission Bay Committee*)

The inconsistency with the Recreation and Open Space Element (ROSE) of the General Plan has not been adequately assessed. It is City Policy to increase the per capita supply of open space. As currently proposed, the Mission Bay Plan will reduce the City's per capita supply. How will this impact be compensated for? How will the maintenance be provided to make up for the additional wear and tear on existing parks? Where will the Mission Bay's residents meet their open space needs? (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

The SEIR should specifically compare the amounts and locations of proposed public open space in Mission Bay with the Guidelines and the open space categories (V.M.20) shown in the Recreation and Open Space Element.

Amount: The DSEIR states that the "(q)uantity of open space per resident population is not addressed in the Open Space Element" (V.M.21). That is not correct. The Open Space Element Objective 2, Policy 1, states that the National Park and Recreation Association (NPRA) standard is 10 acres of open space per 1,000 population, that City, State and Federal property permanently dedicated to open space uses in San Francisco totals 5.5 acres per 1,000 San Francisco residents, and "(g)iven the City's existing development patterns, high population density, and small land mass, the NPRA standard will not be possible to achieve within the City limits. *Nevertheless, to the extent it reasonably can, the City should increase the per capita supply of public open space within the City*" (emphasis added), and . . . "the City should work toward eliminating . . . deficiencies and improving the distribution of open space throughout the City."

The amount of public open space proposed in Mission Bay, with an estimated resident population of 10,900 (V.M.9), a 500 student school and 43 acres of open space (excluding 4 of the 8 acres on the UCSF site, which needs to serve 2,650,000 sq. ft. of instruction, research and support space, as well as the 5,557,000 gross sq. ft. of Commercial Industrial and Office uses in Mission Bay South<sup>1</sup>) is grossly inadequate.<sup>2</sup> It would be helpful if the SEIR could publish Map 2, page I.3.11 of the Recreation and Open Space Element (bad copy attached) which clearly shows that this area is already significantly underserved compared with the rest of the City.

Mission Bay North, with an estimated resident population of 5,300 and only 6 acres of public open space, and where the private open space will only be 35 sq. ft. per unit in blocks N1 and N2 (see DS&G p. 36) compared with 70 sq. ft. per unit of private open space in the rest of Mission Bay, is particularly underserved.<sup>3</sup>

<sup>1</sup>28,300 employees (at 1/290 gsf) x .14 acre/1000 employees = 3.962 acres of open space needed to serve the campus and the R&D/Office population.

<sup>2</sup>10,900 residents on 47 acres = 4.31 acres/1000 residents. 10,900 residents on 43 acres = 3.94 acres/1000 residents.

<sup>3</sup>5,300 residents on 6 acres of open space = 1.132 acres/1000 residents. At 5.5 acres/1000 residents, Mission Bay North would need 29.15 acres of public open space.

(Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee)

Quantity of Open Space: *"Therefore, the proposed project . . . would have . . . more acres of open space than the approved Mission Bay Plan"* SEIR V.M.22.

That statement is incorrect. Removal of the 11 acre wetland results in the proposed project having **fewer** acres of open space than the approved Mission Bay Plan. (Robert B. Isaacson, President, Mission Creek Conservancy)

The public open space plan is substandard. It does not comply with the San Francisco General Plan. This substandard ratio of open space to developed space and to the number of people living and working in the project will make this area of San Francisco a less desirable place to live, work and play. (Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association)

### **Response**

The comments suggest that the proposed project does not include an appropriate amount of open space to satisfy the needs of the new residents based on *San Francisco General Plan* Open Space Element policies, and that the SEIR is in error in stating that the *San Francisco General Plan* provides no quantified standard establishing appropriate amounts of open space per resident. One comment states that the development program analyzed in the SEIR includes less open space than the development program previously approved for the former Mission Bay area; another comment states that China Basin Channel (Mission Creek) provides additional necessary open space for the Project Area given the proposed density of development. One comment asks how maintenance of existing parks will be increased to accommodate increased use from Mission Bay residents and employees.

The comments cite Open Space Element Objective 2, Policy 1, which calls for providing enough public open space in the City to serve the City's population, distributed evenly so that open space is within easy travel distances. The discussion of this policy in the General Plan references National Park and Recreation Association (NPRA) standards that establish ratios of types of parkland recommended per 1,000 people. When totaled, the NPRA standard for all types of parkland is 10 acres per thousand persons. The NPRA standard was used in assessing open space in the 1990 FEIR./1/

The referenced NPRA standard was current at the time the 1990 FEIR was certified and at the time Objective 2, Policy 1 was added to the Open Space Element of the General Plan. Since that time, the NPRA has changed its approach to assessing the need for open space in a community.



Neither the NPRA nor the Recreation and Open Space Element establish numerical standards for the amount of open space appropriate for new development. As discussed below, the SEIR presents a reasonable approach, based on the approach suggested by the General Plan in assessing the adequacy of the open space to be provided for a new development. The SEIR addresses open space demand in terms of availability of open space within distances recommended in the General Plan (see pp. V.M.21-V.M.22 and V.M.26-V.M.28). The SEIR discusses open space demand and relates the project's proposed open space to need for open space created by new residents and employees using the provisions of the Open Space Element that call for various types of open space to be provided within specified distances. The SEIR notes that the project would fulfill the demand for passive recreation space, and would generally fulfill the demand for active recreation space, although not always within the distances recommended by the Element (see pp. V.M.26-V.M.27).

The NPRA no longer suggests a uniform national standard. In 1995 the NPRA updated the *Park, Recreation, Open Space and Greenway Guidelines*, taking a different approach to setting a standard for open space demand. Instead of using the same standard for every community, the new approach recognizes that every community is different, and proposes a "level of service" methodology, based on community-wide surveys, for each jurisdiction to estimate its residents' demand for different types of parkland./2/ Community differences include cultural, social, economic, and environmental characteristics that should be taken into account when determining park and recreation guidelines. The Guidelines also recommend that the open space system for a community be developed reflecting the unique resources of the community, such as developing recreation opportunities around local wetlands or creeks. Therefore, the NPRA's new approach eliminates the use of a single quantitative national standard. The current approach is appropriate for citywide, long-term planning purposes, but not for addressing project-level environmental impact assessment. The new approach taken by the NPRA appears consistent with the discussion of the former NPRA standard in the City's Open Space Element. The discussion under Policy 1 notes that the former standard would be unrealistic for San Francisco's densely-developed urban area with its small land mass of less than 30,000 acres./3/

As noted by some comments, the Recreation and Open Space Element of the General Plan does address quantity of open space per resident. The Element does not, however, establish a policy for how much open space per resident a new development should provide. The demand for various types of open space was assessed in the SEIR according to provisions of the Element, as described above. The middle paragraph, third sentence from the end, on p. V.M.21, has been clarified to read:

**The Recreation and Open Space Element, while discussing quantity of open space per capita resident population is not addressed in the Recreation and Open Space Element generally, does not establish a policy on the quantity of open space desirable in any new residential development in the City.**

Policy 1 of Objective 2 establishes a policy of increasing the City's per capita public open space, then assessed at about 5.5 acres per thousand persons, where it is reasonably feasible to do so.

The per capita amount of open space cited in the General Plan includes not just neighborhood and district open space but also large urban parks. The General Plan estimates that half of city-owned acreage of 3,300 acres is large open space used by all city residents and half is smaller open spaces used by nearby residents (Recreation and Open Space Element, p. I.3.7). Thus at the time the General Plan was written, the smaller, localized open spaces made up about 40% of the city total, or about 2.2 acres per 1,000 persons. By comparison, the project, as noted by a comment, would provide 4.3 acres per 1,000 new residents, a substantially greater per capita amount.

The comment by the Recreation and Park Department includes the information that San Francisco currently has about 5,591 acres of public parks and open space. Despite the City's 7.5% population increase between 1990-97, to 778,068 (p. V.C.10 of Section V.C, Business Activity, Employment, Housing, and Population), the per capita amount of open space has increased substantially, from the 5.5 acres per 1,000 cited in the General Plan, to about 7.2 acres per 1,000 in 1997. This suggests that the City has been successful in achieving the General Plan goal of increasing per capita open space to the extent it reasonably can.

It seems reasonable to assume that the policy of increasing the City's overall per capita open space was not intended to be applied on a development-by-development basis. To exceed the 5.5 acres per 1,000 person amount, an individual development would have to provide open space in excess of the former NPRA standard of 5.0 acres per 1,000 persons for neighborhood and district open space. Given the General Plan's recognition that the former NPRA standard is not possible for the City to achieve, it seems unlikely that the policy intended individual developments to exceed the neighborhood and district park standard. If, however, Policy 1 of Objective 2 was intended to be applied to a large development program such as Mission Bay, then the project would not respond to this provision of the Open Space Element. The City decision-makers, including members of the Planning Commission and the Board of Supervisors, are charged with interpreting and applying provisions of the General Plan as part of their actions on the proposed project; these decision-making bodies will determine whether or not Policy 1 intends that major development projects should provide enough open space to meet or exceed the 5.5 acres-per-thousand-persons ratio suggested in the Open Space Element. It will use that determination in evaluating the project, along with other Recreation and Open Space policies.

The formula used in the San Francisco Recreation and Park Department comment to assess the amount of open space available on a citywide basis compared to numbers of households in the City would



suggest that the Mission Bay area alone, if compared to the City as a whole, would provide substantially less open space per household. It is not clear from where this formula was derived or whether a ratio of households to square footage of total citywide open space, applied to a project, provides a meaningful estimate of project open space demand. Even if this were an appropriate standard to use, then the most similar comparison would not be to divide the number of Mission Bay households into the amount of open space provided in the Mission Bay Project Area, but to add the Mission Bay Project Area open space to the citywide total, and divide that total by the new citywide total number of households that includes the 6,090 Mission Bay dwelling units. That comparison results in 797 square feet of open space per household based on 1990 census information, and 781 square feet of open space per household including both Mission Bay dwelling units and proposed open space, an approximate 2% reduction.

It is not clear what assumptions went into the formula offered by Recreation and Park staff. It is unclear, for example, if the formula accounts for region-serving open space located in San Francisco, such as the City's 1,000-acre Golden Gate Park and the 620 acres in the Golden Gate National Recreation Area, or that it accounts for how new residents would use existing open space in the Project Area or how existing residents would use new open space in and near in the Project Area. It may not be appropriate to relate total households in the City to citywide open space when substantial amounts of that open space serve a population that extends far beyond the city limits. Residents of the Mission Bay Project Area would use open space in nearby areas, such as the Potrero Hill Playground and the South Beach Park; residents of South Beach, South of Market and Potrero Hill would be expected to use open space in the Project Area. Due to their shoreline locations, the proposed open space along the Channel and along Terry A. François Boulevard adjacent to the Bay would serve the city-wide population. Thus, it seems less appropriate to assess the Project Area open space in relation only to the Project Area residents.

The conclusion, based on commentor's applying the formula to Mission Bay, that an extraordinary burden would be placed on parks in surrounding neighborhoods because the project's proportion of open space per household would be substantially below the city average, is thus subject to question. It may be more reasonable to conclude that much of the project's demand would be absorbed in the form of incrementally increased use of the regional/national open space in the City that is included in the formula (e.g., Golden Gate Park, Golden Gate National Recreation Area including the Presidio, Candlestick Point State Recreation Area).

One comment asserts that the State CEQA Guidelines Appendix G, section G(a) should be used as a basis for evaluating significance. Appendix G is advisory, as noted in Guidelines Section 15064(e), which cites Appendix G for examples which "may" be deemed to be a significant effect on the

environment, and therefore need not be used as the basis for determining significant impacts. Nevertheless, the SEIR analysis of open space demand fulfills the analysis requirements of this Appendix section, and the project would not result in a significant open space demand.

One comment asks for a breakdown of quantity and location of proposed open space. Figure XII.2 shows possible open space locations for the project based on Figure V.M.3, on p. V.M.20, with approximate acreage for each location. These are preliminary numbers but they provide a good indication of the expected distribution of open space throughout the Project Area.

An overall comparison of the proposed amount of open space to that proposed in the previously adopted Mission Bay Development Agreement is somewhat complex, primarily because the Project Area for the presently proposed Redevelopment Plans is different from that included in the previous project. The project as defined for the SEIR does not include the port-owned property east of Third Street and north of Mission Rock Street, nor does it include the Caltrain station and track area between Fourth and Sixth Streets in Mission Bay North. The previous project area also included a portion of China Basin Channel, now not included in the Project Area. As noted in the SEIR on p. V.M.26, a direct comparison of the open space proposed in the present Project Area with that proposed in the *same* area under the 1990 Plan results in 7.5 additional acres of open space in the current project. Adding the water areas of the Channel would not change this conclusion, because the Channel remains open area whether or not it is included in the definition of "Project Area," and therefore would be appropriately added to both scenarios. The 11 acres of open space originally included on port property in the 1990 Plan would have provided a greater amount of total open space in the general vicinity of the current Project Area.

If the project would cause increased use of existing public open space outside the Project Area, this increased use might establish a need for additional maintenance. Maintenance staffing and costs are economic issues generally not required to be addressed under the provisions of CEQA./4/ For informational purposes, it is noted that the project is proposed to include a Community Facilities District to fund open space maintenance within the Project Area.

#### Quality of Proposed Open Space

##### *Comments*

We are concerned about the treatment of open space. . .Heaven forbid we allow parking in open space. (*Dick Millet, Member, Potrero Hill Boosters and Merchants Association*)

The public open space is substandard. The design does not comply with the San Francisco General Plan.





The substandard ratio of open space to development space and the number of people working in and living in [the] project will make this area of San Francisco less desirable to live, work, and play.

A substantial percentage of the open space -- is along busy roadways, and the next two are under the 280 freeway. And this seems to be drive-by open space concept, not appropriate for actual use. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

Page III.15: "Open Space": The total open space acreage is exaggerated by designating wastelands underlying freeway ramps and adjoining railroad tracks as "open space." The public hardly needs such generous bequests. Redesignation as "Public Facilities (transportation)" would be more honest and would better reflect the overall scale and balance of the project. . .

Page V.M.23: Proposed Open Space: "A portion of this park would be under the freeway, and therefore [ . . . ] would accommodate certain active forms of recreation [ . . . ]" The only active recreation the underside of a freeway, designated open space or not, has ever attracted is graffiti tagging. Similar remarks apply to the suggestion that the southern "park" underneath the freeway might blossom into a softball field. It is insulting to the public to include such wasteland in the "open space" account. (*Richard Mlynarik*)

Making matters worse, the DEIR fails to address with any specificity the issue of the quality of open space provided by the Project. This is an especially critical issue given the severe underprovision of the required quantity of open space. How much of the 47 acres of "open space" would be under the freeway? How much is within the Mission Creek Harbor Association leasehold? . . . plus an unbiased description of the quality of this open space based on shading and sun exposure, proximity to busy roads, and other relevant characteristics. (*Trent W. Orr, Attorney at Law, representing Mission Creek Conservancy*)

Quality of Open Space: The error cited above appears to be more than one of counting. The Open Space section of the EIR "sells" the project, rather than analyzing it. It reads like a travel brochure.

In reality, with some exceptions, the areas devoted to open space were crudely selected as those which couldn't support revenue producing uses.

Even the deficiencies are glossed over with slick verbage. "*A portion of this park would be under the freeway, and therefore would not be useful for certain types of passive recreation, such as quiet conversations, sunbathing, and viewing. This space would accommodate certain types of active recreation, . . . skateboarding, rollerblading, or basketball.*" Where is the mention of toxic byproducts of the freeway traffic above? Who will rollerblade under a freeway? Who will play basketball there? "*The rest of this park is planned as a grassy, landscaped area around the existing pump station.*" Who is going to picnic next to a sewage pumping station which is next to multiple sewer outfall gates?

The development plan trivializes the need for quality open space. To "sell" this in the EIR without mentioning its deficiencies is at odds with the bulk of the EIR, which is admirably thorough and even handed. It's too bad that evenhandedness didn't rub off on the authors of the open space section. (*Robert B. Isaacson, President, Mission Creek Conservancy*)



**LOCATION:** Of the 6 acres of proposed open space in Mission Bay North, approximately 3 acres would be “at the western end of the Channel on the north side . . . adjacent to and surrounding the existing (sewer) pump station” (V.M.23). Since a portion of this park would be underneath the 280 freeway, and therefore not useful for passive recreation, its value to the residents of Mission Bay North is substantially diminished. In addition, under Variant C (VII.20), if the existing at-grade rail crossing at King Street cannot be kept open or moved to Berry Street, and a service road needs to be constructed from Mission Bay North to the Hooper Street at-grade crossing to mitigate the significant problems associated with the lack of westbound access, the amount of open space in Mission Bay North would be further reduced, and an even higher percentage would be under the freeway. This should be addressed in the SEIR. (*Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee*)

A substantial percentage of the open space is along busy roadways and next to or under the 280 freeway. This seems to be a drive-by open space concept, not appropriate for actual use. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

The open space is inadequate, is often in shadow from buildings and is, in several cases, located adjacent to or under freeways and busy roads. (*Janet Carpinelli, President, Lower Potrero Hill Neighborhood Association*)

### **Response**

A number of comments question the designation of space under freeway structures as “open space.” The usefulness of open space near busy roadways or railroad tracks was questioned by others. Including parking space in a park area as part of the open space total was questioned. Finally, the quality of open space that may be shaded by new buildings was questioned.

The proposed open space under the I-280 freeway at the west end of the Channel is described in the SEIR as not being useful for quiet recreational activities (see p. V.M.23). This does not mean that the space would be unusable. Noisy recreational activities would also be incompatible with quiet conversations and contemplative viewing; therefore, it is appropriate to designate relatively noisy areas for noisy recreational activities such as skateboarding or rollerblading. Under similar circumstances, a neighborhood-serving park in a residential neighborhood on Claremont Avenue in Oakland, located under the State Route 24 structure and BART tracks, has a dog run and basketball courts and is regularly in use for both intended purposes.

As with the open space under the freeway structure, the open space proposed along Mariposa Street west of the proposed new intersection with Fourth Street would be relatively noisy near the street, as discussed in Section V.G, Noise and Vibration, on p. V.G.18. The text on p. V.M.26, at the end of the first partial paragraph, has been expanded to include this information in the Community Services section:

**The other park, approximately 2.5 acres in size, would be located just north of Mariposa Street and west of the proposed Fourth Street extension; it would be a green, flexible-use,**

**community park large enough to accommodate a soccer field. This location would be relatively noisy from traffic on nearby streets (see “Cumulative (Year 2015) Traffic Noise,” in Section V.G, Noise and Vibration: Impacts, above); therefore, more active noisy uses, such as a soccer field, could be appropriately placed nearer the streets, with quieter recreational uses, such as picnic areas, placed further from the streets.**

The portion of the open space near the Channel in Mission Bay South that would be large enough to accommodate a softball field would not be under the freeway structure, but would fit in the portion of the open space that would be east of the freeway. The last sentence in the second paragraph on p. V.M.27 has been clarified to read:

**Open space areas that could be available for formal active recreation include: the western end of the linear park south of the Channel, east of the I-280 freeway structure, if a softball or soccer field were developed; . . .**

The open space at the west end of the Channel would also be adjacent to the Caltrain tracks that parallel Seventh Street in this area. A fence is proposed to be constructed along the tracks for safety purposes to keep people using the open space from straying onto the tracks. This would delineate the usable open space as well as providing for pedestrian safety. The open space adjacent to the tracks would not be used for transportation purposes and thus, should not be designated public facilities (transportation), as suggested by one comment. Were this area to be re-designated for and used for transportation purposes, this would not constitute a significant environmental effect, but would be a change in the proposed land use of the project.

Calculations of open space areas routinely include accessory parking that is part of that open space. For example, Golden Gate Park is about 1,000 acres. This acreage includes several parking areas such as the lot behind the bandstand in the Music Concourse and the parking at Stow Lake. Parking in McLaren Park near the golf driving range is also included in this park's size. Similarly, the parking area for the new boat launch ramp facility at Pier 52 would serve a recreational facility; thus, it is appropriate to include it in calculating the amount of open space for the bayfront park along Terry A. François Boulevard. As noted in the SEIR on p. V.M.25, the parking lot would be about 1 acre in size, reducing the usable area of the park from 6 to about 5 acres.

Shadow on proposed open space is discussed in Visual Quality and Urban Design, under “Shadow and Wind,” on pp. XII.81-XII.84.



### Open Space on the Waterfront

#### **Comment**

The ROSE [Recreation and Open Space Element] also calls for assuring “that new development adjacent to the shoreline capitalizes on its unique waterfront location . . .” (page I.3.25). It is the presence of wildlife that makes this part of the shoreline unique. (*Ruth Gravanis, Golden Gate Audubon Society, and Conservation Committee, San Francisco Group of the Sierra Club*)

#### **Response**

The comment cites the Recreation and Open Space Element's policy calling for development on the waterfront to use this unique location, noting that what makes the shoreline unique along Mission Creek is the presence of wildlife.

The project proposes public open space along both shores of the Channel, making appropriate use of its waterfront location. Open space is also proposed adjacent to Terry A. François Boulevard along the Bay shore, responding to the Recreation and Open Space Element.

### Mitigation for Open Space

#### **Comment**

Possible mitigation measures to address this potential adverse impact could include providing additional open space, particularly larger areas for athletic fields and recreational uses requiring more space. (*Joel B. Robinson, Acting General Manager, San Francisco Recreation and Park Department*)

#### **Response**

The comment suggests mitigation for alleged deficiencies in the amount of open space provided by the proposed project. The SEIR analysis of open space proposed does not show that the project would result in a significant environmental impact; therefore, no mitigation measures are required for this potential impact under CEQA. Decision-makers may consider the extent and usability of open space in the final project proposal in their deliberations on whether to approve the project and whether and what conditions to impose on that approval.

### **Utilities**

### Wastewater

#### **Comment**

The Technical Review Committee will be further refining the feasible alternatives, and they have suggested that:

Reclamation and reuse of wastewater, if wastewater is separated from stormwater, is possible to achieve in Mission Bay on a year round basis. This water could be used for HVAC, toilet flushing, irrigation, and possibly (if Title 22 exemptions can be achieved), to provide a constant source of freshwater to flush Mission Creek. It would also reduce the amount of wastewater that needs to be sent to the Southeast Plant, freeing up capacity in wet weather for stormwater storage and treatment. . .

The Technical Report states that “an onsite reclamation facility to serve recycled water to the Mission Bay development would need to be constructed for recycled water to be used in the project.” One of the biggest obstacles to building an onsite facility is finding the land. We have reviewed the Assessor's records, and attach a map showing Assessor's Blocks 3807 and 3808, which are directly across 7th Street from the Channel Pump Station. Lot 12 in Block 3807 is City owned, and currently occupied by Sunset Scavenger. The area between Block 3807 and Block 3808 is the underground continuation of Channel Street (also known as China Basin Channel or Mission Creek). We strongly recommend that use of Lot 12 and Channel Street between 7th and Carolina Street for a water reclamation facility be investigated as part of the Mission Bay Planning process, and that the City make a commitment to providing land to make use of alternative technologies possible in and around the project area. (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

### ***Response***

The comments suggest that reclamation and reuse of wastewater could be achieved in Mission Bay and recommend parcels for an on-site facility. Wastewater has generally not been considered to be a natural resource that should be conserved. However, based on expected statewide water shortages in the next century, many water supply agencies, including the San Francisco Public Utilities Commission, are considering reclaimed wastewater as an additional water source. The City has prepared a Draft Recycled Water Master Plan, implementation of which will somewhat reduce the City's demand for potable water, as discussed in the SEIR on pp. V.M.40-V.M.42. About 70% of the demand for recycled/reclaimed water is expected to be for landscape irrigation./5/ Thus, the City is already planning for use of a portion of citywide wastewater. The SEIR analyzes water demand under two scenarios, assuming that no recycled water is available, and assuming that most of the commercial and industrial land uses in the Project Area would use recycled water. Therefore, the SEIR addresses the potential impacts of not using reclaimed wastewater. As noted below in responses under “Reclaimed Water, UCSF,” on pp. XII.447-XII.450, the San Francisco Public Utility Commission has indicated that it could supply the proposed project assuming conservation measures are included; Measure M.2, on p. VI.53, identifies water conservation measures that are proposed to be included in the project.

UCSF's laboratory research buildings are constructed pursuant to state law that requires a potable and a separate “industrial” water supply system; the industrial supply serves the emergency showers in the laboratories and therefore also must contain potable water. To use non-potable, reclaimed water for toilet flushing, and possibly for building cooling systems, would require a third set of pipes in each building. If UCSF were to comply with the City's's dual piping ordinance, and if the campus were



able to use non-potable water in all of its facilities for toilet flushing and building cooling systems, the total non-potable water demand for the project would increase from 0.98 million gallons per day (mgd) to about 1.18 mgd. This would reduce the project's overall percentage of citywide potable water consumption from about 2.35% to about 2.1%. This difference would not constitute a significant change in water consumption. This issue is discussed further below.

Neither a separate wastewater reclamation plant nor a separate wastewater treatment and reclamation plant have been suggested for the Mission Bay Project Area in the Draft Recycled Water Master Plan, as noted below under "Reclaimed Water, UCSF." The Draft Recycled Water Master Plan proposes to use treated effluent from the City's Oceanside Water Pollution Control Plant and provide further treatment at a tertiary treatment plant to supply recycled water. Significant effects on water supply were not shown in the water supply analysis; therefore the SEIR does not call for mitigation in the form of a reclaimed water plant in the Mission Bay Project Area. If a reclaimed water plant were to be added to the project, it would not reduce the total flows to the Southeast Water Pollution Control Plant, nor would it reduce the total pollutant loads discharged from the Southeast Plant by a substantial amount. Secondary-treated effluent would be pumped back to the Project Area's reclamation plant for further treatment, reducing the volume of effluent discharged to the Bay from the Southeast Plant by a small amount, compared to existing and projected overall volumes of wet and dry weather flows, as discussed in Hydrology and Water Quality, under "Wastewater Flows" on pp. XII.322-XII.327. If a treatment and reclamation plant were to be added to the project to treat and reclaim up to about 1 million gallons per day (considerably less during wet weather when demand for landscape irrigation would be less), it would reduce volumes and pollutant loads discharged from the Southeast Plant by a small amount compared to existing and projected discharges (less than 1.5% of total dry weather flows). As the Southeast Plant has the capacity to treat sewage from the Project Area, a separate plant is not needed and has not been included in the project nor included in mitigation measures in the SEIR. The site suggested in one comment as potentially available for a reclamation facility is not within the Mission Bay Project Area and would not be directly available to Catellus or the City for this purpose.

#### Reclaimed Water, UCSF

##### *Comments*

Under CEQA Guidelines (Sections 15126(f) and 15127), a Draft EIR must also identify significant irreversible environmental changes "if the project would wastefully consume resources". Wastewater, which could be treated and reused for irrigation or other benign uses, is a resource that would be wastefully consumed by the Mission Bay project as designed. Section IX.B of the EIR should identify a significant irreversible environmental change because of the project's failure to include technologies to recycle and reuse the vast amount of wastewater that would be generated by the project, and this impact should be mitigated accordingly.

The wasteful consumption of resources from the project, as proposed, will be especially egregious in regard to the UCSF campus, which is not proposed to include dual piping to allow for the later reuse of gray Water. Such dual piping is required in large projects under City regulations, but the University of California has refused to honor this local regulation. Although the University may be allowed to ignore this regulation under State law, the EIR should acknowledge that this wasteful planning for the consumption of resources would occur, as is required under CEQA. Again, appropriate mitigation measures should be included. . .

Third, the UCSF facility in Mission Bay should include dual piping to allow for the eventual recycling of gray water in the project. As noted above, such piping is required under City regulations, but the University has stated that it will not comply with such regulations. The failure to install dual piping would lead to avoidable but irreversible consumption of resources in a wasteful manner. (*Kate White, Program Director, Urban Ecology, Inc.*)

The report states that UCSF and the Giants could also use reclaimed water generated in Mission Bay. The Technical Review Committee stated that even if UCSF is not legally bound by City ordinance to provide dual piping and incorporate use of reclaimed water, the University as well as the Giants, should "not be allowed to opt out". (*Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee*)

Under San Francisco's Water Recycling Master Plan prepared in 1992 and updated in 1996, the Mission Bay project should have an on site reclamation facility to provide a year-round recycling program, including the new Giants Stadium and University of California San Francisco (UCSF) campus. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

### **Response**

The comments suggest that the project would result in wasteful consumption of water resources, particularly related to the exemption of the University of California San Francisco (UCSF) from local requirements to provide for use of reclaimed water. The water demand calculations are based on typical volumes for the land uses proposed. There is no evidence in the SEIR or cited background documentation that the project would result in wasteful consumption of resources. Wastewater has generally not been considered to be a natural resource that should be conserved. The water supply analysis, on pp. V.M.39-V.M.42, discusses water use under two scenarios: use of reclaimed water and potable water, and use of only potable water. In these analyses, the SEIR accounts for the expectation that UCSF would not use reclaimed water. Total water demand from the project, including that estimated for UCSF, would amount to about 3% of the total citywide demand if only potable water were used in the Project Area. This amount would not result in a significant or wasteful use of water resources.

The San Francisco Public Utilities Commission has indicated that it could supply water to the Project Area, assuming that reasonable water conservation measures are used (see "Water Demand" on p. V.M.39). Water conservation methods are described in Section VI.M, Mitigation Measures:



Community Services and Utilities, in Measure M.2 (p. VI.53). They include use of water conserving appliances, water-efficient laboratory techniques, water- conserving irrigation systems, drought-resistant landscaping, and public information materials.

As noted above, under *Wastewater*, the City is planning to use recycled wastewater on a citywide basis in the future. The Draft Recycled Water Master Plan estimates that industrial users would comprise about 8% of the total demand for reclaimed water.<sup>/6/</sup> The estimated recycled water demand for Mission Bay in the Recycled Water Master Plan is about 0.76 million gallons per day, substantially less than the 0.98 mgd demand estimated in the SEIR, without accounting for any demand from UCSF facilities. Thus, the project would use more reclaimed water than assumed in the citywide plan, and would not be using potable water in a wasteful manner.

Since publication of the Draft SEIR, Catellus and its engineering consultants have studied alternative water supply sources in more detail, particularly sources that could reduce flows of wastewater to the Southeast Water Pollution Control Plant (Southeast Plant). One possible opportunity is to use water from sites where permanent dewatering wells have been installed to remove groundwater around deep permanent structures such as the Moscone Convention Center or the BART tunnels. Currently, dewatering efforts from those structures results in groundwater discharged into the City's combined sewer system for disposal. Based on the Catellus investigation of the quantity of groundwater available at these locations that could be used as recycled water, it does not appear to be feasible to implement within the Project Area due to the cost of constructing a conveyance and distribution system to and throughout Mission Bay. Catellus is working with the City in exploring other potential sources of high-quality groundwater.

On p. V.M.40, the following has been added before the last sentence in the second paragraph under "Reclaimed Water System:"

**If a new source were located, some reclaimed water service could be provided earlier than the availability of recycled water from the Oceanside Water Pollution Control Plant and the westside wells.**

The City cannot compel UCSF to provide dual piping because the University is a state agency and is not subject to most local ordinances. City decision-makers may choose to discuss the matter with UCSF representatives during the Mission Bay project decision- making process. While failure to provide for potential future reclamation of water may be considered a missed opportunity for conservation, it would not constitute wasteful use of the resource and therefore would not be a significant impact under CEQA. The San Francisco Giants Ballpark is not part of the Mission Bay project and is already approved and under construction.

The *Draft Recycled Water Master Plan* calls for a recycled water treatment plant on the west side of the City near the Zoo./7/ Storage reservoirs are proposed including at Lincoln High School in the Sunset District and in McLaren Park in the southeast area of the City. Distribution facilities would include pump stations, transmission pipelines, and service vaults to serve local users; service vaults are shown in a number of locations, one in the Mission Bay area, on Figure 2-3 of the *Draft Recycled Water Master Plan*. No reclaimed water treatment plants are suggested for the Mission Bay Project Area. Non-residential buildings of over 40,000 sq. ft., other than those that are part of the UCSF site, are expected to include dual piping for use of reclaimed or recycled water, in compliance with Ordinances 390-91 and 391-91, as explained in the SEIR on p. V.M.40.

### Police Services

#### ***Comment***

Police. The DSEIR states that “police vehicles would not have to cross any bridges or pass under the freeway to gain access to proposed development south of the Channel” (V.M.7.) Since the Bayview Station is on Williams Street, in Bayview-Hunters Point, it is south of the Islais Creek Bridge on 3rd Street, which is the main access road from Bayview-Hunters Point to Mission Bay South. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

#### ***Response***

The comment asks how police vehicles could access the Project Area from the Bayview Station without crossing bridges that could be damaged in a major earthquake. The Bayview Station is located on Williams Street, and is south of Islais Creek. The most direct route would be via Third Street, crossing the Islais Creek bridge. However, vehicles can also use Bayshore Boulevard, west of the creek without using the bridge, to César Chavez Street and from there access Third Street or travel over Potrero Hill using Pennsylvania Avenue or other local streets, to reach Mission Bay South. This route would require that vehicles cross under the I-280 freeway structure at one of several available points. The third sentence of the third full paragraph on p. V.M.7 has been revised to read as follows:

**Similarly, Mission Bay South is now served by the Bayview Station, which is located such that police vehicles would not have to cross any bridges or pass under the freeway to gain access to proposed development south of the Channel. Routes west of Islais Creek, that do not cross any bridges to reach Mission Bay South, would require vehicles to pass under I-280 on César Chavez Street, 25th, 20th, 18th, Mariposa, or 16th Streets. The typical route north to Mission Bay uses Third Street, crossing Islais Creek, and does not go under any freeway structures.**



## Cumulative Impacts

### ***Comment***

The cumulative analysis in the Draft EIR is confusing, inconsistent and inadequate.

First, there is no cumulative impact analysis whatsoever in the Community Services and Utilities Section (Section M) of the Draft EIR. While the stormwater section (Section K) does have a cumulative impacts analysis, CEQA requires a cumulative impact analysis for all impact areas. The EIR must be revised to include this analysis for all municipal services, including wastewater treatment. The EIR should be recirculated to allow for public review of this new analysis. (*Kate White, Program Director, Urban Ecology, Inc.*)

### ***Response***

As explained in the discussion of Public Health Services: Impacts on p. V.M.13, demand for staff or equipment is not considered to be a physical environmental impact, although the cost of these additional services could be a fiscal concern for decision-makers. As noted in CEQA section 21100(d), significant effects are limited to changes in physical conditions; thus social and economic effects are not required to be analyzed in EIRs.

The analysis of effects of a project on some community services is prepared based on the need for new facilities in the localized area of the project. For example, the analysis of need for fire services considers the need for an additional fire station, or the need for additional facilities at an existing local station that already serves a project site. The analysis in the SEIR shows that an additional fire station would be needed to serve Mission Bay South. This new fire station would not contribute cumulative impacts throughout the City; the localized effects are accounted for in the analysis of the proposed project. The analysis in the SEIR also indicates impacts related to police services and public health services are similarly localized; the discussion in the SEIR shows that new structures for police and public health services would not be needed as a result of the proposed project.

Water supply, solid waste disposal, and sewer facilities are analyzed on a citywide cumulative basis where appropriate. For example, water demand from the project is related to both citywide and regional forecast cumulative water supply quantities provided by the San Francisco Water Department. Solid waste volumes are assessed in relation to the capacity of the regional landfill that accepts San Francisco's solid waste for disposal. Sewer facilities are discussed in relation to the City's Bayside sewer system and wastewater treatment plants. The effect of additional sewage and stormwater runoff that uses the sewer system and treatment plants is discussed in Section V.K, Water Quality and Hydrology, as noted by the comment.

### Interim Uses, Detention Basins

#### **Comments**

Detention basins. On V.K.55-56 and V.M.52-53, there is discussion of interim improvements, such as detention basins, to control drainage to the combined sewer system. In addition to constructing fences around interim surface detention basins (Mitigation Measure M.4 on VI.53), vector control, particularly control of mosquitos, is critically important. We already have a serious mosquito problem, and don't want it to get any worse. We would also like to see something other than ugly chain link fence used around the detention basins. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

The drainage scheme proposed for the interim parking lots envisions that "parking lots would drain to one or more surface detention basins south of the ballpark lot and north of UCSF." Section V.K56 suggests detention basins would be located "between the Giants and UCSF parking lots." It is not clear whether detention basins would jointly serve the ballpark parking lots and UCSF parking lots or whether lots would have their own detention basins. It is not clear to us that detention basins need to be located "between the Giants and the UCSF parking lots" and we request that the analysis consider the use of on-site detention basins within each of the ballpark parking lots.

The drainage plan for the interim parking lots assumes "one acre-foot of detention would be needed for every 10 acres of parking." What is the source of this assumption? (*John F. Yee, Senior Vice President and Chief Financial Officer, San Francisco Giants*)

#### **Response**

The comments request mosquito control for the proposed interim parking lot stormwater detention basins, and request that proposed fencing around these basins be made more attractive than typical chain-link fencing. Comments also request clarification of the location and sizes of proposed detention basins.

The interim parking and drainage plan is illustrative only. As noted on p. V.K.56, "The ultimate system, however, could vary and might include more than one basin." Page V.M.53 states that "These parking lots would drain to one or more surface detention basins south of the ballpark lot and north of UCSF." Figure III.B.4, on p. III.18, provides a diagram of one scheme that would provide for stormwater drainage for portions of the interim ballpark parking areas as well as the interim UCSF parking. The analysis of stormwater and water quality effects of drainage from interim parking uses is not dependent upon an assumption that there would be a single detention basin for all parking areas; therefore, the request in the comment that on-site detention basins be provided within each ballpark parking lot is not precluded by the SEIR discussion.

It is not known whether water would remain in detention basins long enough to breed mosquitos, as the portion of the insect's life cycle that is dependent on water is about 7 days and the detention basins may



drain completely in a shorter time than 7 days after most storms. If water were to pond for long periods, mosquitos might breed.

The San Francisco Department of Public Health does not have a citywide mosquito abatement program. Mosquito complaints are accepted by the Environmental Health Management Division, and Health Department staff will assess a potential site and recommend abatement procedures upon receipt of a complaint./8/ If recommended abatement steps are not taken by the property owner, the Health Department staff could enforce abatement through the nuisance provisions of Section 94 of the Public Health Code./9/

### Phasing of Infrastructure

#### **Comments**

[O]pen space should not be postponed until after the project's substantially completed. It should be developed in phases. (*Mary Anne Miller, Representative, San Francisco Tomorrow*)

Notwithstanding the "Concept of Adjacency", the severe deficiency of open space in Mission Bay North should be mitigated by development of a portion of South Channel Park between 4th and 5th streets concurrent with the development of Residential Areas N-3, N-4 and N-4a (Assessors Blocks 3804-05, 3796-03, 3797-02, 3805-01). A swing pedestrian bridge or alternative pedestrian access across Mission Creek Channel at the 5th Street alignment should be included as part of the project approval process. (See III.36 for mechanism)

Both in Design Subcommittee meetings and in meetings of the full Citizens Advisory Committee, we were repeatedly assured that the inadequacy of public open space in Mission Bay North would be mitigated by:

- A. Development of the portion of South Channel Park between 4th and 5th Streets concurrently with the development of Mission Bay North Residential blocks (N-3, N-4 and N-4a);
- B. Development of a swing pedestrian bridge at the 5th Street alignment to facilitate access from Mission Bay North to South Channel Park.

**SOUTH CHANNEL PARK** The DSEIR does not mention the development of South Channel Park in conjunction with the development of Mission Bay North Residential. In fact, the document refers specifically and repeatedly to the "concept of adjacency", with respect to infrastructure and transportation as well as open space development (III.36, V.M.28). This should be addressed. (*Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee*)

#### **Response**

Development of public open space in the Project Area is proposed to be phased along with development of building parcels, as described on p. V.M.28. In Mission Bay North, public open space would be constructed when the adjacent parcel is developed. Mission Bay South is proposed to be divided into two "zones," divided by The Common. Development in each zone would trigger a requirement to

provide open space in the zone in a defined ratio of 0.46 acres of open space to 1.0 acre of developable area until all designated open space has been developed. Thus, the 8.5-acre park proposed for the south Channel edge would be completely developed at the point when about 18 acres of residential or hotel space was developed in the northern "zone" of Mission Bay South.

Based on this information, open space would not be postponed until other development in the Project Area was nearly complete, but would be constructed in phases along with build-out of the Project Area.

The adjacency concept for infrastructure, including open space, does not include development of open space in Mission Bay South related to building construction and development of parcels across the Channel in the Mission Bay North Redevelopment Area. See "Phasing of Infrastructure" in Transportation, on pp. XII.178-XII.180, for a discussion of houseboat access.

However, to ensure that some level of South Channel Park development occurs early in the Mission Bay South development process, development of the portion of the South Channel Park between Third and Fourth Streets would be triggered by issuance of the first building permit in Mission Bay South for Catellus-owned property, regardless of which zone this first building would be located in. The following new sentence has been added as the next-to-last paragraph on p. V.M.28, carrying over to p. V.M.29:

**In addition to the zone system for establishing development of public open space in Mission Bay South, issuance of the first building permit in Mission Bay South for Catellus-owned property would trigger a requirement to develop the portion of South Channel Park between Third and Fourth Streets.**

The pedestrian bridge crossing the Channel at approximately Fifth Street is discussed in Transportation, under "Fifth Street Pedestrian Bridge," on pp. XII.147-XII.150.

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NOTES: Community Services and Utilities

1. As explained in the 1990 FEIR, the 10 acre per 1,000 person standard is derived by totaling assumed demand per 1,000 persons for all types of parks - 2.5 acres of neighborhood parks, 2.5 acres of district parks and 5.0 acres of large urban parks. The 1990 FEIR compared open space that would be provided by the project to the NPRA standard for neighborhood and district park demand (5.0 acres per 1,000 population) and found that the project would not meet the neighborhood and district park demand criteria. (1990 FEIR, pp. VI.D.68-69, 79, 81.)
2. Mertes, James D., Ph.D., CLP and James R. Hall, CLP, *Park, Recreation, Open Space and Greenway Guidelines*, National Park and Recreation Association, 1996, pp. 47-49.



3. City and County of San Francisco, *San Francisco General Plan*, Recreation and Open Space Element, p. I.3.7
4. *Goleta Union School District v. The Regents of the University of California*, 36 Cal.App. 4th, 1121 (1995).
5. San Francisco Department of Public Works/San Francisco Water Department, *Draft (updated) Recycled Water Master Plan*, revised July 1996, p. 3-1.
6. San Francisco Department of Public Works/San Francisco Water Department, *Draft (updated) Recycled Water Master Plan*, revised July, 1996, pp. ES-6 and 3-1.
7. San Francisco Department of Public Works/ San Francisco Water Department, *Draft (updated) Recycled Water Master Plan*, Revised July 1996, Section 2.
8. Scott Nakamura, Manager, Hazardous Waste and Public Services Sections, San Francisco Department of Public Health, telephone conversation with EIP Associates, June 29, 1998.
9. Scott Nakamura, Manager, Hazardous Waste and Public Services Sections, San Francisco Department of Public Health, telephone conversation with EIP Associates, August 7, 1998.

## MITIGATION MEASURES

### Approval and Implementation of Mitigation Measures

#### *Comments*

And I just come as the rest of the committee to support the Draft EIR and along with the proposal that was put by Ms. Woods in regards to some of the mitigating circumstances that have to be taken care of. *(Stan Smith, Secretary/Treasurer, San Francisco Building Construction Trades Council; Vice-Chair, Citizens Advisory Committee for Mission Bay)*

We are concerned that nowhere in the EIR is it explicitly stated that the list of mitigation measures is considered to be a prerequisite to the implementation of the Mission Bay Project. . .

There are numerous mitigation issues that we feel must be addressed prior to project implementation. *(David Siegel, Lower Potrero Hill Neighborhood Association; Mission Bay Citizens Advisory Committee)*

Another thing I might suggest is a mitigation monitoring report, a reporting program be prepared so that we can see all of the mitigation and who's doing it and how it's going to be done and what the timetable is and how it's going to be implemented and how it's going to look when it's done. *(Jennifer Clary, Board of Directors, San Francisco Tomorrow)*

In conclusion, the Mission Bay DEIR should be amended to ensure that the Project has the fewest possible negative impacts on our communities and the natural resources they rely on. *(Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment)*

Table VI.8, page VI.84: 1990 FEIR H.2: This energy-conservation measure should be adopted, in line with the US commitment to reduce global warming. *(Richard Mlynarik)*

The Mission Bay Citizens Advisory Committee supports: . . .

Strongly support Mitigation Measures K.1 to K.6 in the DEIR. *(Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee)*

The last item. We strongly support mitigation measures K-1 to K-6 in the EIR. *(Corinne W. Woods, Chair, Toxics Subcommittee, Mission Bay Citizens Advisory Committee)*

#### *Response*

The SEIR identifies possible mitigation measures to reduce or avoid potential significant adverse effects of the project; the measures are found in Chapter VI, Mitigation Measures. As part of considering the Mission Bay project for approval, decision-making bodies will consider all of the mitigation measures identified in the SEIR and will either include the mitigation measures as conditions of approval; reject them, giving reasons for rejection (CEQA Guidelines Section 15091); or impose modified or substitute



measures, provided they comply with CEQA. The decision-makers will then adopt a mitigation monitoring program to implement those mitigation measures that have been made conditions of approval. The monitoring program will, as required by Public Resources Code, Section 21081.6, set forth each mitigation measure, the timing of the implementation of the mitigation measure, and the agency or city department responsible for implementing and monitoring the mitigation measure. The mitigation monitoring program will be enforceable by city departments or, where appropriate, by other responsible agencies. Other measures that could reduce non-significant effects of the project could also be required as conditions of approval of the project.

The SEIR cannot make mitigation measures mandatory as requested by some comments, because that decision is part of the project approval process, whereas an EIR is an informational document. For further information regarding the funding of mitigation measures, see response under “Funding of Mitigation Measures,” below.

### **Funding of Mitigation Measures**

#### ***Comment***

Page VI.6: Transportation Mitigation: The wholesale shift of the capital and operating costs of providing public transportation services to Mission Bay onto already-overloaded transit agencies amounts to a gross and unrecoverable subsidy of the private development entities by the transit riders and taxpayers of the region. For example, it appears that over 40% of Muni’s “Third Street Corridor” light rail service will be dedicated to serving Mission Bay, yet no non-negligible portion of the \$400+ million capital cost of this project is to be underwritten by the Mission Bay developers. There are likewise significant capital and ongoing operation cost impacts on and no plausible financing plans for the rest of Muni, for Caltrain, and for AC Transit. The transportation mitigations section confines itself to comparatively small-scale consideration of street intersection design, while leaving the burden of multi-hundred-million-dollar transit costs to “other involved public agencies.” (*Richard Mlynarik*)

#### ***Response***

The SEIR identifies mitigation measures in Chapter VI, pp. VI.1-VI.104. These include Measure E.45, which provides for extension and operation of the route of the N Judah MUNI Metro line from the Embarcadero Station to Mariposa Street. Decision-makers will consider whether to impose these measures, including Measure E.45, as conditions on the project; these measures would be set forth in the mitigation monitoring program. At that time, decision-makers must consider the feasibility of each mitigation measure. Feasibility determinations include, among other factors, an assessment of the costs and an assessment of the current or future availability of funding to pay for each mitigation measure. In addition, the mitigation monitoring program will identify the city department or other agency responsible for implementing the mitigation measure.

As is described on pp. III.38-III.39 of Chapter III, Project Description, there are a number of possible sources of funding for necessary mitigation measures.

### **Delay in Specification of Mitigation Measures**

#### ***Comments***

These comments are directed at the DEIR regarding how the existing project alternatives and the impact of combined sewage overflows (CSOs). . . fail to mitigate significant impacts of the project. . . In Sundstrom v. County of Mendocino, 202 Cal.App.3d 296 (1988), the court held that an agency must identify and analyze mitigation measures in the CEQA document so that the public and governmental decision-makers can review and comment on the measures. CEQA is a public information and participation law that requires an open and transparent environmental review process. Only by subjecting mitigation measures to public scrutiny can the public be assured that those measures will be effective in mitigating project impacts. As the court of appeals recently held, "the City cannot rely on post approval mitigation measures adopted during the subsequent design review process. . . there cannot be meaningful scrutiny of a [CEQA document] when the mitigation measures are not set forth at the time of project approval." Quail Botanical Gardens Foundation, Inc. v. City Encinitas (4th Dist. 1994) 29 Cal. App.4th 1597, 1605, fn.4 (1994).

In short, Sundstrom makes clear that under CEQA an agency may not approve of a project based upon hypothetical and undefined mitigation measures to be adopted at some future time. Hypothetical measures may by their very nature be perfect -- but CEQA demands real, clearly defined mitigation measures upon which the public may comment, and upon which governmental authorities may base informed, well-considered decisions.

However, the DEIR fails to contain adequate mitigation measures. For example, the DEIR acknowledges CSO impacts are significant, but provides only the following mitigation measures

K.3 Design and construct sewer improvements such that potential flows to the City's combined sewer system from the project do not contribute to the increased annual overflow volume. (DEIR VI.47)

K.4 Implement alternative technologies or use other means to reduce settleable solids and floatable materials in storm water discharges to China Basin Channel to levels equivalent to, or better than, City treated CSOs. (DEIR VI.47)

This. . . is woefully inadequate under CEQA and Sundstrom. The DEIR fails to require these mitigation measures and fails to provide an adequate discussion of their design and implementation. Thus, the public is left to blindly trust that such measures will actually be implemented. This is a violation of CEQA. Accordingly, the DEIR must be supplemented to include actual mitigation measures and a mitigation monitoring plan to ensure that such measures will be implemented. (*Mike Thomas, SAFER!/CBE Organizer; Lesley Barnhorn, Legal Intern; and Scott Kuhn, Staff Attorney, Communities for a Better Environment*)

[W]e remain hopeful that the project will assist us in decreasing pollution on the east side of the City rather than exacerbating those issues. Unfortunately, the SEIR, perhaps somewhat hesitantly, identifies



this as a significant impact, but unfortunately maintains very vague reference to what the actual mitigation measures might be, and in particular leads my reference to opportunities of wetland projects in the area which could be used to treat some of these pollution issues. . .

The slope is somewhat slippery. The cumulative analysis adds up to roughly 1.4 million gallons of CSO discharges from the cumulative projects.

It also -- excuse me, I take that back, 98 million gallons of extra CSO discharge into the City, 1.4 million gallons to Hunters Point plant.

We urge that the mitigations be clarified for these items and that they be included in the final EIR. (*Michael R. Lozeau, Executive Director, San Francisco Baykeeper*)

The environmental review's failure to describe with any particularity a plan to mitigate the adverse impacts of the estimated increases in polluted rainwater expected to be discharged through new storm drain outfalls to Mission Creek and the east side of the City's shoreline. **PROPOSED NEW SOURCES OF STORM WATER DISCHARGES SHOULD NOT BE DISCHARGED TO THE BAY SHORELINE WITHOUT PROMOTING A BENEFICIAL USE, SUCH AS A WETLAND. OTHERWISE, VALUABLE WATER IS BEING WASTED AND DISCHARGED WITH POLLUTION AT LEVELS HIGHER THAN THEY NEED BE.**

In particular, the absence from the SEIR of a plan to mitigate both the volume of combined sewer overflows and polluted rainwater discharges through a combination of storm water flow control measures (including, among other measures, building design standards assuring reduced runoff from Mission Bay buildings, surface permeability standards for streets, parking areas, and other generally impermeable areas, and storm water catchment technologies as an element of building design [e.g. the use of cisterns and grey water systems], surface features and as part of the CSO and storm water systems), flow through treatment technologies, and treatment wetlands. . .

Given the size of the Mission Bay project, articulating a clear mitigation plan which sets forth a coordinated strategy to reduce flows into the CSO system and, hence, out of the CSO overflows at Mission and Islais Creeks, must be included in the SEIR. . .

Mitigation measures K.3 and K.4 on [their] face do not provide any information as to how the significant adverse impacts of increases [in] wastewater and storm water flows from the Mission Bay project and/or all reasonably foreseeable projects [would be mitigated]. . .

As regards the reference at K.4 to implementing alternative technologies, there is no possible way an interested person could comment on the cursory list of possible measures. (*Michael R. Lozeau, Executive Director, San Francisco BayKeeper*)

### ***Response***

The comments raise concerns that the mitigation measures, especially K.3 and K.4, are not clearly defined. The comments assert that CEQA does not permit a local agency to leave determination of mitigation measures to the future. One comment alleges that the SEIR is inadequate because it fails to

require mitigation measures and fails to provide an adequate discussion of their design and implementation.

As noted in the response regarding “Approval and Implementation of Mitigation Measures” on pp. XII.456-XII.457, an EIR is an informational document and cannot require mitigation measures. The decision whether to require mitigation measures is made as part of a project’s approval process.

Mitigation Measures K.3 and K.4 suggest specific, measurable performance standards that are directly related to avoiding the project’s contribution to identified cumulative impacts. The measures also suggest various ways in which the performance standards could be achieved. This type of mitigation measure is not hypothetical or undefined; it merely allows flexibility in achieving a measurable, specific goal. The measure was intentionally drafted in this manner because the project is expected to require at least 20 years to build out, and design and construction of the new permanent sewer system in Mission Bay South may not need to begin for many years. Therefore, it is preferable, particularly with measures calling for new and alternative technologies, to allow for selection of the best technologies available at that future time, rather than locking in a particular detailed approach now. The important point is not which of the many different methods may be used to achieve the performance standards, but that, if the measures are adopted, the City can be assured that the standards will be met and the impacts they address will be avoided.

The mitigation measures cited by the comments have been subject to public review during the SEIR process. The public has had the opportunity to review and comment on the appropriateness of the measures as they address impacts of CSOs and untreated stormwater discharges. The possibility of future public input on the specific methods that may be chosen to comply with the measures has not been foreclosed, and there will be opportunities for public input during the project approval process.

See the response regarding “Approval and Implementation of Mitigation Measures” on pp. XII.456-XII.457, for a description of the Mitigation Monitoring Plan.

See the discussion and responses in Hydrology and Water Quality, “Alternative Wastewater Management Strategies” on pp. XII.238-XII.252 regarding wetlands and other wastewater management options. The responses in Hydrology and Water Quality, “Illustrative Mitigation Scenarios,” on pp. XII.253-XII.277, provides additional information about two of many possible ways of implementing Mitigation Measures K.3 and K.4 on p.VI.47, which relate to reducing volumes of combined sewer overflows and treating stormwater discharges to China Basin Channel.



## VARIANTS

### Variant 1: Terry A. François Boulevard Variant/Expanded Bayfront Open Space Proposal

#### *Comments*

We believe that the best planned feature of the project is to move west of Terry A. François Boulevard to create regular waterfront open space. (*Dick Millet, Potrero Jill Boosters and Merchants Association*)

If Variant 1: Terry A. François Boulevard Variant is chosen, access to the waterfront for delivery trucks, boat trailers, and other essential waterfront transport must be maintained, possibly via a service road or cut-ins across the Bayfront Park. Parking for the Public Boat Launch Ramp at Pier 52 must be maintained, and parking for non-trailer vehicles should be found. (*Corinne W. Woods, Mission Creek Harbor Association, and Waterfront Chair, Bay View Boat Club*)

#### *Response*

One comment notes a preference for the Terry François Boulevard Variant while the other states that if the variant is incorporated into the approved project, provisions would need to be made for maintaining essential waterfront vehicular transport, parking for boat launching, and parking for non-trailer vehicles. As discussed in Section A of Chapter VII, Variants to the Proposed Project (pp. VII.2 - VII.11a), under this variant Terry A. François Boulevard would be relocated to the west and the associated open space relocated east near the shoreline. Access issues and parking for the Public Boat Launch Ramp at Pier 54 are discussed under Transportation, pp. VII.5a and VII.7. The public boat launch ramp would remain and public parking would be developed also; it would accommodate boat-launching and non-boat launching vehicles.

Since the publication of the Draft SEIR, additional detail has been developed regarding the program for bayfront open space to be located west of realigned Terry A. François Boulevard as part of the Terry A. François Boulevard Variant. This detail has been developed as the result of conversations between the Port and project sponsors regarding how to implement that variant, if it were adopted. This bayfront open space proposal would involve the coordination of improvement plans for Catellus and 2 acres of port-owned lands to create an integrated and expanded bayfront open space system; the proposal would also involve the designation of a small commercial site in the bayfront open space within the Project Area for development by the Port of recreation-oriented retail space. This proposal is discussed in more detail in the following revisions to Variant 1 in Chapter VII, Variants to the Proposed Project.

On p. VII.1, the text of the first bullet item has been changed as follows:

- **Terry A. François Boulevard Variant:** Under this variant, the alignment of Terry A. François Boulevard would be moved west, away from the Bay, so that a portion of the proposed Bayfront public open space would be directly adjacent to port property fronting the Bay. A proposal for expanded bayfront open space, if adopted, would include development by Catellus of approximately 2 acres of adjacent open space on port property outside of the Project Area, and include provisions within Project Area open space for a 15,000-sq.-ft., port-owned, recreation-oriented retail space that could include related restaurant uses.

On p. VII.2, the following subsection heading and paragraphs have been added at the end of the page:

#### **Proposal for Project/Port Integrated and Expanded Bayfront Open Space**

Since the publication of the Draft SEIR, additional detail has been developed regarding bayfront open space proposed to be located west of Terry A. François Boulevard as part of the Terry A. François Boulevard Variant. This proposal arose from conversations between the Port and project sponsors regarding how to implement the variant, including the coordination of improvement plans for Catellus- and port-owned lands to create an integrated and expanded bayfront open space.

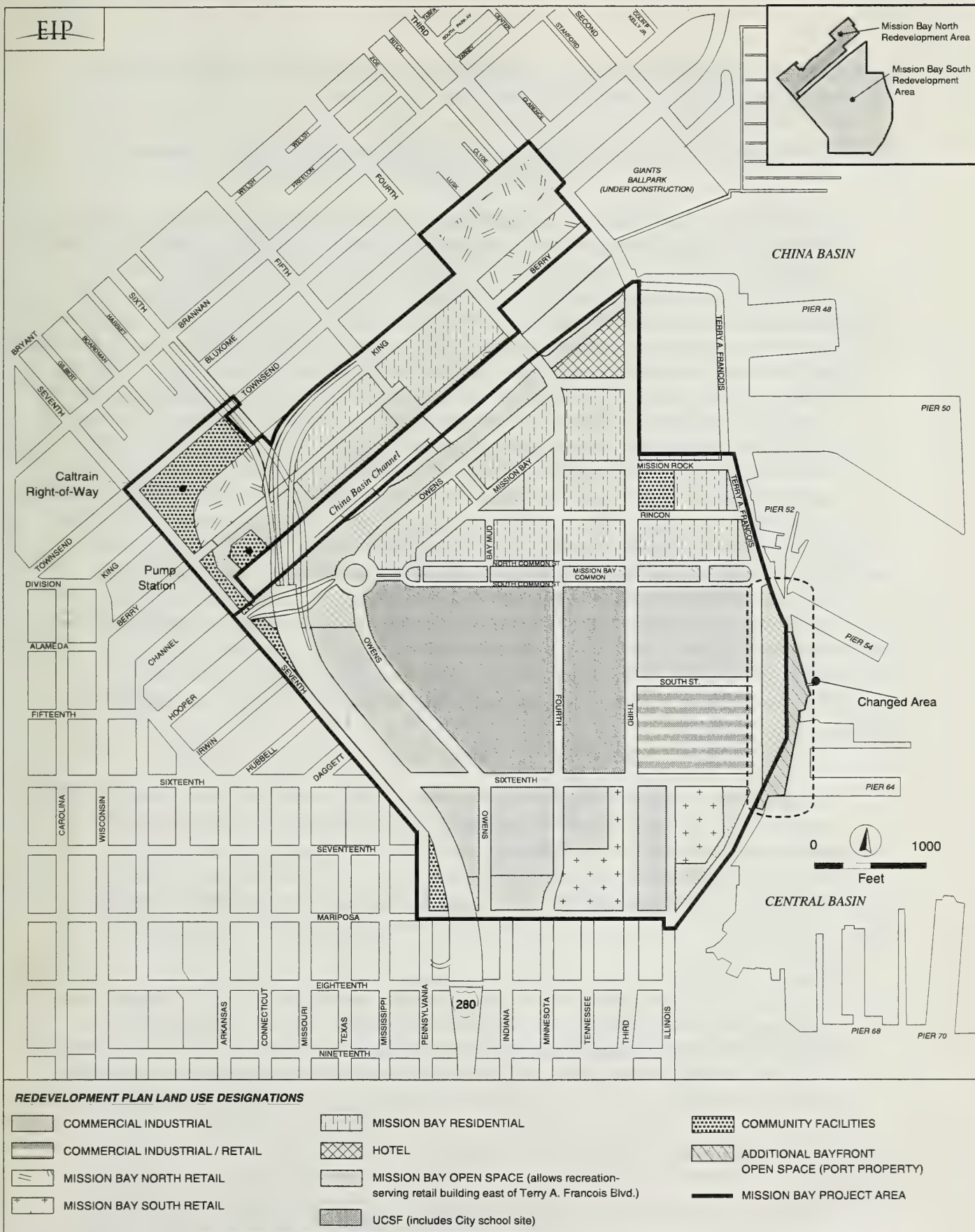
Under the expanded bayfront open space proposal, the Terry A. François Boulevard Variant would be modified as follows (see revised Figure VII.A.1). Open space within the Project Area would be integrated with 2 acres of additional public open space on port property outside the Project Area that Catellus also would develop. Development of the open space on port property would involve the demolition of two existing port-owned commercial buildings that currently house a boat repair business and small-boat storage facility. In addition, the Mission Bay South Redevelopment Plan would be revised to allow a port-owned building containing up to 15,000 gross square feet of recreation-serving retail space that could include related restaurant uses to be built within the bayfront open space area inside the Project Area. Other aspects of the Terry A. François Boulevard Variant would remain substantially the same.

Figure VII.A.1, on p. VII.3, has been revised to show the 2 acres of port property outside the Project Area that would be developed as open space and the notes have been revised to provide some related descriptive information.

On p. VII.4, the following sentence has been added to the end of the “Plans, Policies, and Permits” section:

**If the proposal for creation of the integrated and expanded bayfront open space system is implemented, then amendments to the Waterfront Land Use Plan would be needed to**





SOURCE: San Francisco Redevelopment Agency

### MISSION BAY SUBSEQUENT EIR

**FIGURE VII.A.1 (REVISED) LAND USES FOR TERRY A. FRANCOIS BOULEVARD VARIANT**

**reflect the development of the 2 port acres as an integrated whole with the project's bayfront open space.**

On p. VII.5, the following paragraph has been added to the end of the "Land Use" subsection:

**If the expanded bayfront open space proposal were implemented, development of the additional 2 acres of open space on port property would enhance the project's open space under this variant. As described in the paragraph above, once the existing Terry A. François Boulevard is closed (thereby eliminating the direct access to waterfront uses existing now), and until such time as the existing waterfront uses were vacated, the project sponsors would provide indirect access via a driveway through the parking lot proposed at the north end of the public open space for the public boat launching ramp to a roadway extending south. Under this proposal, access to maritime service uses on Pier 54 would continue to be limited; removal of two commercial buildings, however, would address the issue of limited access to existing waterfront uses in these areas. However, the access difficulties could persist until the expanded open space were developed. This variant's multipurpose pedestrian path would not change, except that it would be constructed closer to the Bay on port property. It is likely that the 15,000-gross-sq. ft. commercial building would be developed on a footprint not to exceed 7,500 square feet within the bayfront open space inside the Project Area under this variant and would be two stories tall. The Port expects to develop recreation-oriented retail space that could include restaurant use. The Port is proposing a minimum amount of parking to accommodate handicapped users, possibly using valet parking to serve other users.**

On p. VII.5, the following sentence has been added to the "Business Activity, Employment, Housing, and Population" paragraph:

**Under the expanded bayfront open space proposal, the commercial development would support up to about 43 new retail employees, a 0.1% increase in the project's 29,994 estimated jobs.**

On p. VII.5a, the following paragraph has been added to the end of the "Visual Quality and Urban Design" subsection:

**Under the expanded bayfront open space proposal, open space would be extended to the bay shore and views of the Bay between Pier 54 and Pier 64 from realigned Terry A. François Boulevard would be unobstructed. Additionally, a small commercial building, most likely two stories in height, would be visible within the bayfront open space inside the Project Area.**

On p. VII.7, the following paragraphs have been added to the end of the "Transportation" subsection:

**If the expanded bayfront open space proposal is adopted, the retail space would not significantly alter the transportation impacts described for the project. The retail space**



would create a total of approximately 130 person trips and approximately 60 vehicle trips more than the project during the p.m. peak hour, and would create about 15 more transit trips than the project during the p.m. peak hour. Most of the additional vehicle trips would occur on 16th Street and Third Street and would not cause any significant impacts beyond those currently described for project conditions.

The parking demand for the additional retail space would be approximately 65 spaces. No on-site parking spaces would be provided beyond a few handicapped and valet or drop-off spaces. Thus, the parking deficit for the project would increase by approximately 1% to approximately 4,820 spaces. Some visitors to the retail space would seek on-street parking in the area. The issues surrounding access to existing boat repair and storage area use, and possibly to other potential future uses, would remain until such time as the Port built the commercial structure and terminated use of the existing port properties.

On p. VII.10, the following paragraph has been added to the “Contaminated Soils and Groundwater” subsection:

**If the expanded bayfront open space proposal is adopted, Article 20, Section 1000, et seq., of the San Francisco Public Works Code, commonly known as the Maher Ordinance (see p. V.J.51), would apply to the port property outside of the Project Area. Current discussions of the proposal include provisions to prepare an RMP for the port property based on the program developed for the Project Area and to include this provision in the environmental remediation agreement that would be part of the Mission Bay South Owner Participation Agreement between Catellus and the Redevelopment Agency.**

On p. VII.10, the following paragraph has been added to the “Hydrology and Water Quality” subsection:

**If the expanded bayfront open space proposal is implemented, the additional open space adjacent to the waterfront as part of this variant would provide an additional potential filtering function for runoff flowing from the rerouted part of Terry A. François Boulevard to the Bay during major storm events.**

On p. VII.11, the following paragraph has been added to the “Vegetation and Wildlife” subsection:

**If the expanded bayfront open space proposal were to propose any uses affecting the shoreline, a range of permits (Army Corp of Engineers), and approvals (Port of San Francisco, BCDC), along with possible subsequent environmental review would be required. Mitigation Measures L.2 (Herring) and L.3 (Turbidity) would be required as they would under the project. However, there is no sensitive wetland or mudflat habitat along the waterfront between Piers 54 and 64. Existing and long-standing land uses are maritime related and industrial in nature. The intertidal area is covered with rubble and sand. Abandoned piers on pilings extend out into the Bay.**

On p. VII.11a, the following paragraph has been added to the "Community Services and Utilities" subsection:

**If the expanded bayfront open space proposal is implemented, the additional 2 acres of open space on port property developed in a manner that would integrate it with that of the proposed project would enhance the project's open space. It would increase total open space from 47 acres to 49 acres (2 acres outside of the Project Area on port property). The integration could increase the usefulness of the open space for active sports uses and increase access to the shore of the bay for passive and possibly active uses.**

On p. VII.11a, the first sentence of the "Summary of Mitigation Measures" subsection has been revised as follows:

**The significant impacts of this variant, and of the expanded bayfront open space proposal, are ~~would be~~ the same as those of the project.**

The last partial paragraph on p. II.36 and the first full paragraph on p. II.37 in the Summary have been modified as follows:

**Under Variant 1, the alignment of Terry A. François Boulevard would be moved west, away from the Bay, so that a portion of the proposed Bayfront public open space would be directly adjacent to port property fronting the Bay. A proposal for expanded bayfront open space, if adopted, would include development by Catellus of approximately 2 acres of adjacent open space on port property outside of the Project Area, and include provisions within Project Area open space for a 15,000-sq.-ft. port-owned recreation-oriented retail space that could include related restaurant uses. Even with the expanded bayfront open space proposal, the** realignment of the roadway would limit direct access to maritime uses on and south of Pier 54, **until the two commercial buildings were removed and the open space was developed. ~~Future users of these port properties could not be assured of direct access.~~ In the interim,** indirect access could be provided through a proposed parking lot and along a service roadway. Under this variant the freight rail track currently in Terry A. François Boulevard would be realigned within the proposed public open space. Project buildings would be separated from the public open space by the realigned Terry A. François Boulevard.

Other environmental effects would be similar to those of the proposed project. The significant impacts of this variant, **and of the expanded bayfront open space proposal, ~~are~~** would be the same as those of the project. No additional mitigation measures have been identified.



### **Variant 3: No Berry Street At-Grade Rail Crossing Variant**

#### ***Comments***

Page VII.1: The No Berry Street At-Grade Crossing Variant is to be preferred: public safety and transportation efficiency dictate minimizing and eliminating grade crossings. (*Richard Mlynarik*)

The SEIR should also illustrate how the maximum development program might be affected by the reduction in city serving retail from 222,000 to 110,000 gsf and the total number of dwelling units in Mission Bay North from 3,000 to 2,870 under Variant 3: No Berry Street At-Grade Rail Crossing Variant. Would the 112,000 gsf of city serving retail move somewhere else in Mission Bay North? Where would the 130 residential units go, and how would this affect the maximum development standards, not to speak of the number and placement of the affordable units? (*Jack Davis, Chair, Design Subcommittee, Mission Bay Citizens Advisory Committee*)

#### ***Response***

One comment states a preference for the variant while another questions what the effect would be from the reduction in retail and housing on the overall development program and the amount and location of affordable housing under the variant. As discussed in Section VII.C, pp. VII.20-VII.31, Variant 3, the No Berry Street At-Grade Rail Crossing, would not include the at-grade crossing. The Business Activity, Employment, Housing, and Population subsection on p. VII.22 discusses the effect of the reduction of retail and residential development on the overall development program. The variant would reduce project employment by 330 jobs or 1% and reduce residents by 220 people. The development program of Mission Bay North would not be increased to compensate for the elimination of retail space and housing. The SEIR concludes that these changes would be too small to affect overall business activity, employment, housing, and population of the development program. The reduction would result in the elimination of approximately 130 units, including approximately 26 affordable units. This would include both Catellus inclusionary affordable units and Redevelopment Agency-sponsored affordable units. Transportation efficiency is discussed on pp. VII.22-VII.24, while public safety is discussed on p. VII.24 and pp. VII.29-VII.30. The project sponsors are currently considering a modified rail crossing variant that would result in some reduction in the retail program for Mission Bay North, but would not change the number of dwelling units as compared to the project (see "Request for a Modified No Berry Street At-Grade Rail Crossing Variant," pp. XII.467-XII.479).

### **Request for a Modified No Berry Street At-Grade Rail Crossing Variant**

#### ***Comments***

In these letters Catellus states that it agrees to close the Berry Street crossing in return for getting the new crossing at what was called Wall Street, I believe is now called Common Street. . .

So I think you are going to have to go along with Catellus' agreement to close both King and Berry Street crossing in return for getting a new one. So, once again, the EIR should be revised that way. *(Norman Rolfe, San Francisco Tomorrow)*

The Draft SEIR adequately describes the "No Berry Street At-Grade Rail Crossing" and the associated impacts; however, based on continuing dialogue with the Peninsula Corridor Joint Powers Board (JPB), a slightly modified variant that connects Berry Street to the proposed Common Street has been proposed. This variant is a modification of both Berry Street schemes analyzed within the Draft SEIR. Within this concept, the Berry Street at-grade rail crossing remains closed and the roadway is realigned to create an intersection with the proposed Common Street, connecting it into the ultimate street network. . . *(Don Parker, Vice President, Bay Area Development, Catellus Development Corporation)*

### ***Response***

The comment notes a possible modification to the Variant 3 whereby the existing Berry Street at-grade rail crossing remains closed (east of Seventh Street and the rail lines), and Berry Street is extended south to Common Street. The proposed modifications to Variant 3, No Berry Street At-Grade Rail Crossing (p. VII.20) are assessed in this response below as a new variant: Variant 3A, Modified No Berry Street Crossing.

The following has been added to follow the third item on p. VII.1:

- **Modified No Berry Street At-Grade Rail Crossing Variant (Modified No Berry Street Crossing Variant):** As with the No Berry Street Crossing Variant (Variant 3), this variant would not include the at-grade railroad crossing at Berry Street that is proposed by the project. The rail crossing across from Hooper Street that is proposed as part of the project would also be proposed under the variant. In contrast to Variant 3, Berry Street would be extended around the end of China Basin Channel to intersect with The Common, immediately east of the Caltrain tracks. The Common would be widened. The intersection of Seventh Street, The Common, and the Berry Street extension would require additional right-of-way from the elimination of two of the five Caltrain tracks that run parallel to Seventh Street between Berry Street and The Common. The three remaining tracks would be shifted about 20 feet east in the area where The Common crosses to Seventh Street. As with Variant 3, due to reduced access to and from the west, city-serving retail development in Mission Bay North on the block west of the I-280 King Street ramp is assumed to be reduced from 222,000 gross sq. ft. with the project to 111,000 gross sq. ft. with the variant. In contrast to Variant 3, this variant would not reduce the number of dwelling units on that block.

Variant 3A is added to p. VII.31 as Section D to follow Section C, Variant 3. On p. VII.31m, Variant 4 is changed from Section D to Section E.



## **D. VARIANT 3A: MODIFIED NO BERRY STREET AT-GRADE RAIL CROSSING VARIANT (MODIFIED NO BERRY STREET CROSSING VARIANT)**

### **INTRODUCTION**

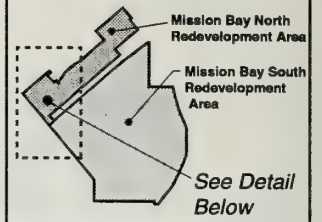
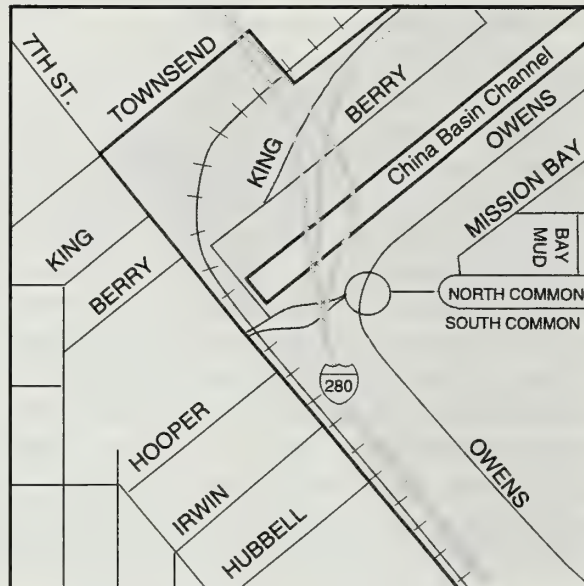
Variant 3, the No Berry Street At-Grade Rail Crossing Variant included in the Draft SEIR, eliminates the at-grade crossing of Berry Street and assumes that the proposed Berry Street crossing of the Caltrain tracks at Seventh Street would not be improved (see pp. VII.22-VII.23). This change from the project in infrastructure would affect, almost exclusively, vehicles traveling to and from Mission Bay North. Under Variant 3, access to the western portion of Mission Bay North would be constrained by physical barriers to the south, north, and west. Access to the mixed-use block west of I-280 would be via Fourth Street to westbound King Street using the frontage road to access the block, or via Fourth Street to King Street to Fifth Street to Berry Street to access the block. Traffic exiting the site would be limited to eastbound Berry Street to Fifth Street to King Street. Third and Fourth Streets would be the westernmost connections to the north for outbound and inbound traffic, respectively. The only direct vehicular connections to Mission Bay South would be at the Lefty O'Doul and Peter Maloney Bridges.

Since publication of the Draft SEIR, the project sponsors developed a second possible solution, which is to extend Berry Street around the western end of China Basin Channel to Common Street near the intersection of Common and Seventh Streets (see Figure VII.D.1). This solution is presented as Variant 3A, the Modified No Berry Street At-Grade Rail Crossing Variant (Modified No Berry Street Crossing Variant). It is described below in more detail.

### **DESCRIPTION**

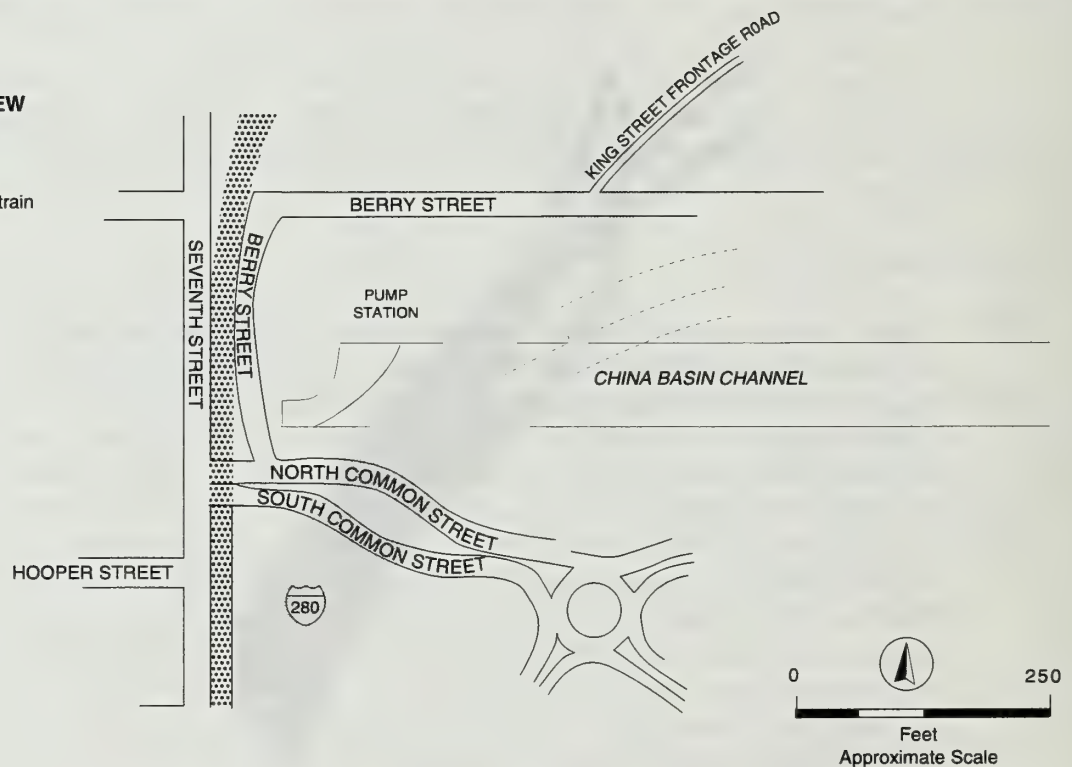
Under Variant 3A, the Modified No Berry Street Crossing Variant, the Berry Street crossing of the Caltrain tracks at Seventh Street would not be improved (similar to Variant 3), and Berry Street would be extended around the end of China Basin Channel to intersect with The Common, immediately east of the Caltrain tracks. The extension of Berry Street would be comprised of one lane in each direction, with the southbound lane widening to two right turn lanes at the intersection with The Common. The Common would be widened to provide three westbound lanes across the Caltrain tracks in order to allow traffic to clear the intersection more effectively. The eastbound direction would remain two lanes wide. This variant also includes two through lanes and an exclusive right-turn lane on Seventh Street for the northbound approach and two through lanes and an exclusive left-turn lane on Seventh Street for the southbound approach. These lane geometry improvements at the intersection of Seventh Street, The Common, and the Berry Street extension would be accomplished because additional right-of-way would be made available with the elimination of two of the five Caltrain tracks that run parallel to

## STREET SCHEMATIC



## DETAIL VIEW

Key

 Caltrain


SOURCE: Wilbur Smith Associates

## MISSION BAY SUBSEQUENT EIR

**FIGURE VII.D.1 (NEW) MODIFIED NO BERRY STREET  
AT-GRADE RAIL CROSSING VARIANT: INTERSECTION LANE CONFIGURATION**



**Seventh Street between Berry Street and The Common.** The three remaining tracks would be shifted about 20 feet east in the area where The Common crosses to Seventh Street to provide space for the exclusive turn lanes on Seventh Street.

These roadway modifications would provide emergency access to Mission Bay North from Seventh Street by crossing the median between South and North Common Streets. They would provide direct egress from western Mission Bay North to Seventh Street. Also, they would provide direct access from Mission Bay South to Mission Bay North that would not be dependent on bridges.

Due to reduced accessibility to the northwestern-most block fronting on Berry Street between Sixth and Seventh Streets without the Berry Street crossing, city-serving retail development under Variant 3A would be reduced 50%, to 111,000 gross sq. ft. from the proposed project's 222,000 gross sq. ft. Residential development proposed under this variant would not be reduced from that assumed for the project (as it would with Variant 3). Although realigning Berry Street would reduce the Caltrain easement by 0.5 acres, it would not reduce open space as proposed for the project.

## **ENVIRONMENTAL ISSUES**

As described below and in comparison to the proposed project, the Modified No Berry Street Crossing Variant would have one significant traffic impact and would require an additional mitigation measure, in addition to those measures identified for the proposed project, to mitigate those impacts. Compared with Variant 3, Variant 3a would have the same traffic impact and the same mitigation measure that would avoid the impact, and would not have Variant 3's emergency response impact and associated mitigation measure.

### **Plans, Policies, and Permits**

For this variant, concerns regarding plans, policies and permits are limited to issues relating to the railway and to railway crossings. The project makes two assumptions about access to the Project Area along Seventh Street: 1) the existing at-grade rail crossing at King Street would be relocated near Hooper Street where the crossing would be reconstructed; and 2) the at-grade rail crossing at Berry Street would require approval by the California Public Utilities Commission (CPUC). As with Variant 3, Variant 3A assumes instead that the Berry Street crossing proposed for the project would not be constructed. In addition, Variant 3A assumes that two of the five Caltrain tracks between Berry and Hooper Streets would be removed to provide additional right-of-way. Jurisdiction over existing or new at-grade rail crossings along Seventh Street by the CPUC and the Peninsula Corridor Joint Powers Board (JPB) is as described on pp. VII.21-VII.22.

### **Land Use**

Because of reduced access to and from the west, this variant assumes that retail development at the western end of Mission Bay North would be reduced 50% to 111,000

gross sq. ft. of city-serving retail space as with Variant 3. Residential development would remain as proposed for the project and would not be reduced as it would in Variant 3. The types of land uses in Mission Bay North would remain the same as the project. Land use implications would be similar to the proposed project.

#### **Business Activity, Employment, Housing, and Population**

This variant would have less city-serving retail development in Mission Bay North than would the proposed project. As a consequence, there would be 310 fewer jobs in Mission Bay North. This would be about 7% fewer retail jobs for Mission Bay North, but only about 1% fewer total jobs in the Project Area. The differences in retail development and retail employment are not large enough to change the conclusions of the business activity, employment, housing and population impact analysis for the proposed project.

#### **Visual Quality and Urban Design**

Visual quality associated with this variant in Mission Bay North would be similar to the project. Height limits would remain the same, but the mass of buildings could be somewhat reduced in the block of Mission Bay North west of the I-280 Sixth Street ramps because of the reduced retail development program.

#### **Transportation**

This variant's change in infrastructure would most affect vehicles traveling to and from Mission Bay North, particularly those destined for the mixed-use development parcel located to the west of the I-280 freeway ramp structure. With this variant, access to the western portion of Mission Bay North would be less constrained than that described for Variant 3. The extension of Berry Street to The Common would provide an additional access point between Mission Bay South and Mission Bay North, and provide more direct access to the western portion of Mission Bay North. Access to the mixed-use block west of I-280 would be via Fourth Street to westbound King Street using the frontage road to the block, via Fourth Street or I-280 to King Street to Fifth Street to Berry Street to the block, or via Seventh Street to The Common to the roundabout to the extension of Berry Street to the block. Traffic exiting from this site would travel eastbound Berry Street to Fifth Street to King Street, or southbound to the Berry Street extension, and westbound to The Common to Seventh Street.

As described above, for this variant, retail development was assumed to be reduced in the mixed-use parcel west of I-280 (i.e., the blocks bounded by Seventh Street, Berry Street, the I-280 freeway ramp structure, and the Caltrain tracks) to lessen the traffic impacts on nearby intersections. The retail development assumed in this area of Mission Bay North was reduced to a level that would allow impacted intersections to be mitigated in the same or similar ways as described under project conditions.

The reduced amount of retail space would result in approximately 320 fewer person trips during the p.m. peak hour. Approximately 75 of these person trips would be made on transit. Nearly one-third of the reduction of transit trips, or about 25, would be to and



from the East Bay, suggesting that this variant would have less impact on regional and local transit providers compared to the project./4a/

This variant would also lessen the parking demand created by Mission Bay by approximately 490 spaces, or about 2% less than the total project demand. Table VII.D.1 compares the p.m. peak-hour person-trip generation of the variant with that of the project.

The described network would require traffic generated by the western part of Mission Bay North (blocks west of Fifth Street) to either travel to King Street or The Common to enter and leave the area. Consequently, the intersections of Third and Fourth Streets with King and Townsend Streets, the intersection of Fifth and King Streets, and the intersection of The Common and Seventh Street would be most affected. Levels of service at all but one of these intersections would be worse under this variant than under the project despite a small reduction in trip generation, because vehicles would have fewer access points to and from the west end of the Mission Bay North area. The key intersections for this variant are shown in Table VII.D.2.

**TABLE VII.D.1**  
**PM PEAK HOUR PERSON TRIP GENERATION IN 2015**  
**VARIANT 3A COMPARED WITH PROJECT (new)**

| Area              | Project       | Variant 3A    | Difference |
|-------------------|---------------|---------------|------------|
| Mission Bay North | 11,030        | 10,710        | -320       |
| Mission Bay South | <u>22,470</u> | <u>22,470</u> | 0          |
| Total             | 33,500        | 33,180        | -320       |

Source: Wilbur Smith Associates

**TABLE VII.D.2**  
**YEAR 2015 CUMULATIVE INTERSECTION LEVEL OF SERVICE COMPARISON**  
**VARIANT 3A COMPARED WITH PROJECT (new)**

| Intersection                  | Project         |     | Variant 3A      |     |
|-------------------------------|-----------------|-----|-----------------|-----|
|                               | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| Fourth and Townsend Streets   | 14.4            | B   | 32.4            | D   |
| Third and Townsend Streets    | 79.7            | F   | 78.0            | F   |
| Fifth and King Streets        | 28.4            | D   | 37.5            | D   |
| Fourth and King Streets       | 52.1            | E   | 65.6            | F   |
| Third and King Streets        | 99.1            | F   | 104.5           | F   |
| Seventh Street and The Common | 42.3            | E   | 25.5            | D   |

Source: Wilbur Smith Associates

The intersections of Third and King Streets, and Third and Townsend Streets would operate at LOS F with the project under 2015 cumulative conditions, and would continue to do so with this variant, with slightly higher average vehicle delays. The intersection of Fourth and King Streets would operate at LOS E under the project conditions, and would operate at LOS F under Variant 3A, as described for Variant 3. The delay at the intersections of Fourth and Townsend Streets and Fifth and King Streets would increase, but not to an unacceptable level of service. The intersection of Seventh Street with The Common would operate at LOS E under the project and would improve to LOS D under this variant due to the lane geometry improvements proposed at this intersection under this variant.

In summary, future LOS at one intersection would improve from unacceptable LOS E under the project to acceptable LOS D under the variant, and one intersection would experience LOS F under the variant compared to LOS E under the project. Other intersection levels of service would remain approximately the same as under the project or would degrade under Variant 3A but not to unacceptable levels.

#### Air Quality

The change in land use under Variant 3A would slightly alter traffic patterns and the number of vehicle trips in the Project Area compared to the project. Vehicular emissions would be reduced by about 1% compared with those of the proposed project. As shown in Table VII.D.3, vehicular emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> would exceed the BAAQMD significance thresholds for regional air quality impacts. Trip reduction measures discussed in Mitigation Measure E.47 in Section VI.E, Transportation, would not reduce emissions of criteria pollutants below these BAAQMD significance thresholds. Therefore, as under the project, these vehicular emissions would be an unavoidable significant regional air quality impact.

Due to the level of carbon monoxide emissions expected, three of the 13 intersections modeled for the proposed project were selected for analysis for this variant. The CO concentrations would be slightly lower for the variant than for the project (see Table VII.D.4).

In this variant, the decrease in overall traffic would slightly reduce toxic air contaminant emissions from mobile sources. As under the project, combined emissions of toxic air contaminants would be an unavoidable significant impact.

#### Noise and Vibration

A comparison of the traffic estimated for this variant with that for the proposed project shows that the variant would have traffic volumes similar to or less than the proposed project at all of the noise study locations. The noise levels for one-hour L<sub>eq</sub> and 24-hour L<sub>dn</sub> would be substantially the same at all of the locations studied. All other noise and



**TABLE VII.D.3  
ESTIMATED VEHICULAR EMISSIONS  
FROM VARIANT 3A TRAFFIC IN 2015**

| <b>Pollutant</b>                       | <b>BAAQMD Threshold<br/>(lb/day)</b> | <b>Project<br/>(lb/day)</b> | <b>Variant 3A<br/>(lb/day)</b> |
|--|--------------------------------------|-----------------------------|--------------------------------|
| Reactive Organic Gases (ROG)           | 80/a/                                | 865                         | 860                            |
| Nitrogen Oxides (NO <sub>x</sub> )     | 80/a/                                | 1,324                       | 1,371                          |
| Particulate Matter (PM <sub>10</sub> ) | 80/a/                                | 1,968                       | 1,958                          |
| Carbon Monoxide (CO)                   | 550/b/                               | 12,228                      | 12,163                         |

*Notes:*

- a. The BAAQMD regards this amount of emissions as a threshold of significance for a regional impact.
- b. For carbon monoxide, the BAAQMD does not regard 550 lb/day as a threshold of significance, but rather, an indicator to perform microanalysis.

*Source:* EIP Associates. Based on modeling using the California Air Resources Board's URBEMIS version 5 model.

**TABLE VII.D.4  
ESTIMATED LOCAL CO CONCENTRATIONS AT  
SELECTED INTERSECTIONS IN 2015 FOR VARIANT 3A**

| <b>Intersection</b>       | <b>Proposed Project (ppm)/a/</b> |                   | <b>Variant 3A (ppm)</b> |                   |
|---------------------------|----------------------------------|-------------------|-------------------------|-------------------|
|                           | <b>One-Hour</b>                  | <b>Eight-Hour</b> | <b>One-Hour</b>         | <b>Eight-Hour</b> |
| Third and 16th Streets    | 11.0                             | 6.3               | 10.9                    | 6.2               |
| Third and King Streets    | 13.6                             | 7.6               | 13.4                    | 7.4               |
| Fourth and Bryant Streets | 8.3                              | 5.3               | 8.4                     | 5.3               |

*Notes:*

ppm = parts per million.

- a. Refer to Table V.F.5 and associated text in "Criteria Air Pollutants" under Section V.F, Air Quality: Impacts.

*Source:* EIP Associates.

vibration issues discussed in Section V.G, Noise: Impacts, would remain substantially the same with this variant as for the proposed project.

### **Seismicity**

The Modified No Berry Street Crossing Variant would not alter the geologic, soils, or seismic conditions in the Project Area and would not, therefore, create associated seismic impacts. However, this variant could create minor emergency access issues because of the somewhat circuitous routes between existing police/fire stations and the mixed-use parcel west of I-280 in Mission Bay North (see discussion of emergency access issues under Community Services and Utilities, below). If the fire station is built in Mission Bay South (see Mitigation Measures H.5, p. VI.38, and M.6, p. VI.54), the circuitous routes would still exist for responses from outside the Project Area, but would be eliminated for responses within the Project Area.

### **Health and Safety**

There would be only minor changes in the built land use program under this variant. Therefore, no substantive difference in health and safety impacts would occur, except that by not constructing the at-grade crossing at Berry Street, emergency access response times to Mission Bay North could be longer than under the project but shorter than under Variant 3. Potentially, this could hinder responses to emergencies involving hazardous materials. See the discussion of emergency access under "Seismicity," above, and "Community Services and Utilities," below.

### **Contaminated Soils and Groundwater**

There would be no substantial differences in the effects of contaminated soils and groundwater in the Project Area under this variant, compared with effects described for the proposed project.

### **Hydrology and Water Quality**

The decrease in sanitary sewage associated with the reduced retail space would reduce, somewhat proportionally, the discharge of treated wastewater to the Bay and the consequential pollutant mass loading attributable to the project. However, impacts and mitigation measures for this variant would be the same as those for the proposed project (see Section V.K, Hydrology and Water Quality: Impacts, and Section VI.K, Mitigation Measures: Hydrology and Water Quality).

### **Vegetation and Wildlife**

This variant would not affect China Basin Channel differently than the proposed project.



## Community Services and Utilities

The Modified No Berry Street Crossing Variant could create minor emergency access issues in comparison to the proposed project. Issues would arise from the circuitous routes that police and fire fighting vehicles would need to take, in the absence of the proposed project's Berry Street crossing, between existing police/fire stations outside the Project Area and the mixed-use parcel west of I-280 in Mission Bay North. The routes under Variant 3A would require a combination turn at the proposed intersection of Seventh Street, Common Street and the Berry Street extension. However, such routes from existing fire stations would be less circuitous under Variant 3A than under Variant 3. The longer emergency response time under Variant 3A in comparison to the proposed project (shorter than under Variant 3) would not be a new significant impact because the Berry Street extension would provide sufficient access, in contrast to the absence of access under Variant 3. This is not considered a new significant impact because the proposed emergency access routes, although slightly circuitous, would not be subject to closure if the 3rd or 4th Street Bridges were raised or rendered inoperative (which could cause major delays or eliminate access); therefore the mitigation measure described for Variant 3 under "Seismicity" on p. VII.27, would not be needed for Variant 3A. Further, the issue would be ameliorated if the project's fire station were built (see Mitigation Measure H.5 and M.6, pp. VI.38 and VI.54, respectively). The following discussion describes the circuitous nature of the routes and related access issues in more detail.

As described for Variant 3 on pp. VII.26-VII.29, emergency vehicles would access the mixed-use parcel west of I-280 from the east via two routes: (1) from Fourth Street, and (2) from the south around the west end of China Basin Channel from Seventh and Common Streets. One access route would be from the east on Berry Street from Fourth Street along a pedestrian path. It would allow emergency vehicles to pass through to Fifth Street and onto the mixed-use parcel. Another access route to the mixed-use parcel would be from westbound King Street (no eastbound access is planned) to Berry Street, which would be a two-way through street west of Fifth Street.

Under Variant 3A, access to and from Seventh Street would be from Common Street along a two-way extension of Berry Street adjacent to the Caltrain tracks. Similarly, access to the residential blocks west of Fifth Street would be limited, but also would be available from King Street by turning left on Fifth Street. No direct emergency access would be available from the north across the Caltrain tracks. Under Variant 3A, fire and ambulance emergency vehicles would negotiate a combination turn off Seventh Street onto Common Street, across a low raised median at the west end of Common Street, and onto the Berry Street extension. Police vehicles might not be able to cross the median, in which case they would need to drive along South Common Street to the roundabout and back along North Common Street to the proposed Berry Street extension. Because of the circuitous nature of the access route to the west end of Mission Bay North, the response time for all emergency vehicles destined for this part of the Project Area would be longer than the proposed project. Compared to the project, the restriction created by the combination turn or the trip through the roundabout could cause delays in emergency access to the mixed-use parcel west of I-280 or to the residential parcels west of Fifth

**Street. The return route from Berry Street to Seventh Street would be direct for all vehicles.**

**First response fire service from Fire Station No. 8 at 36 Bluxome Street, ambulance service from Fire Station No.1 at 676 Howard Street, and police service from Southern Station at 850 Bryant Street would access the mixed-use parcel via Fourth Street (see Figure V.M.1 in Section V.M, Community Services and Utilities). Without alternate routes from the north or west, emergency vehicles would be delayed by any traffic backups on Fourth Street. If first-response fire service (Fire Station No. 8) were not able to respond to a call, the fire service to Mission Bay North would come from Fire Station No. 29 at 299 Vermont Street, located west of the Project Area. Fire trucks traveling from Fire Station No. 29 to the mixed-use parcel west of I-280 would need to travel along Townsend Street to Fourth Street and then west along King Street or the Berry Street emergency access route, or east on 16th Street to Seventh Street, north to Common Street, across Common Street to the Berry Street extension, and north on the extension to the mixed-use parcel. These somewhat circuitous routes would delay the fire service response time compared to the proposed project.**

**Secondary ambulance and police service would come from Fire Station No.17 and the Bayview Station, respectively, which are south of the Project Area. Emergency vehicles from these stations would use Third Street or Seventh Street to access the Project Area. This variant could reduce secondary response time under normal (i.e. non-disaster) emergency conditions by providing an alternate route to Mission Bay North around the west end of China Basin Channel, rather than across the Channel on the Third or Fourth Street Bridges. In the event of a severe earthquake that damaged the bridges crossing the Channel, all emergency access from the south, if it were to be provided by Fire Station No.17, would be along this west-of-Channel route.**

**The Berry Street extension proposed in this variant, in contrast to Variant 3, would reduce the emergency access problem. It would improve secondary access when the typical routes along through-streets experience severe congestion. Also, it would provide a less circuitous route for fire trucks from Fire Station No. 29, avoiding the longer route along Townsend Street. Constructing a new fire station in Mission Bay South as proposed in Mitigation Measures H.5, p. VI.38, and M.6, p. VI.54, would eliminate circuitous access routes and the access issues under this Variant 3A.**

**Special emergency access issues arise in the aftermath of a damaging earthquake. Debris from older existing buildings nearby could block streets leading to northern access points along Townsend Street, thereby creating delays. The bridges across the Channel may not be passable immediately following a damaging earthquake. In such a situation, a new fire station sited in Mission Bay South to reduce the effects of limited emergency access south of the Channel could be hampered in providing primary or backup capability north of the Channel. The Berry Street extension could provide such access. Primary and backup response also would be available from fire stations at Bluxome Street and at Howard Street, north of the Project Area. The proposed low median near the intersection of Common Street with Berry Street would allow fire vehicles and ambulances sufficient**



room to make the combination turn from Seventh Street, across Common Street to the Berry Street extension.

This variant's reduction of city-serving retail space and increase in Commercial Industrial space would not be large enough to substantially alter demand for other community services analyzed for the project.

### Growth Inducement

The small differences in Project Area employment under this variant compared with the proposed project would not result in material differences for cumulative citywide and regional growth.

### Summary of Mitigation Measures

All significant impacts identified for the project would also occur with this variant, and all mitigation measures in Chapter VI, Mitigation Measures, would apply, with the exception that the at-grade rail crossing at Berry Street would not be a feature of the project nor would Mitigation Measures E.20a, E.20b, and E.20c for the intersection of Seventh Street and Berry Street (see p. VI.12). Further, if Variant 3A were adopted, Mitigation Measure E.31b (p. VI.19) for Seventh and Berry Streets would be modified as follows to remove references to left and right turn lanes that would cross the tracks and add turn lanes to the part of Berry Street west of Seventh Street:

Restripe the northbound and southbound approaches to provide a shared left-through left-turn lane and a through lane, and restripe the southbound approach to provide a through lane and a shared right-through lane.

Mitigation Measures E32a and E.32b (p. VI.19) for the intersection of Seventh Street and The Common are proposed features of Variant 3A and therefore are included in the transportation analysis for this variant.

The mitigation measure for the intersection of Fourth and King Streets under this variant would be slightly different from that proposed for the project, in Mitigation Measure E.38 on p. VI.20. It would be the same as that proposed for Variant 3 on p. VII.24. This measure would include an exclusive left-turn lane, one exclusive through lane, a shared right turn/through lane, and an exclusive right-turn lane for the southbound approach to the intersection of Fourth Street. The project mitigation measure identifies one exclusive left-turn lane, two exclusive through lanes, and one exclusive right-turn lane for the southbound approach of Fourth Street at King Street. Implementation of the mitigation measure for the variant would require the same increase in street width as for the proposed project.

Variant 3A includes reconfiguration of Seventh Street at Common Streets, and, in effect, implements Mitigation Measure E.32 identified for the project. In contrast to Variant 3, the intersection of Fifth and King Streets would not be significantly impacted and would not require mitigation under Variant 3A. Other transportation mitigation measures would be the same as those identified for the project.

Because Variant 3A eliminates the significant emergency access impact found in Variant 3, the associated "Emergency Access" mitigation measure described on p. VII.31 would not be required.

The following new Endnote 4a has been added to p. VII.65:

/4a/ Travel distribution is based on San Francisco Planning Department, Public Utilities Commission and Transportation Authority, *Citywide Travel Behavior Survey*, May 1993, Supplemental Tables.

The following new text has been added after the second full paragraph on p. II.38 in the Summary:

**MODIFIED NO BERRY STREET AT-GRADE RAIL CROSSING VARIANT  
(MODIFIED NO BERRY STREET CROSSING VARIANT)**

Like Variant 3, Variant 3A would not include the at-grade railroad crossing at Berry Street that is proposed by the project. Under this variant, Berry Street would be extended around the western end of China Basin Channel to Common Street near the intersection of Common and Seventh Streets. The rail crossing across from Hooper Street that is proposed as part of the project would also be proposed under the variant.

Variant 3A constitutes another way to solve the access difficulties that would be created if no vehicular crossing were built at Berry Street. Due to reduced access to and from the west, city-serving retail development in Mission Bay North on the block west of the I-280 King Street ramp is assumed to be reduced from 222,000 gross sq. ft. with the project to 111,000 gross sq. ft. with the variant. In contrast to Variant 3, this variant would not reduce the number of dwelling units on that block.

The significant impact of Variant 3 on Fifth and King Streets would not occur under Variant 3A. The intersections of Fourth and King Streets would operate at LOS F under Variant 3A, in contrast to LOS E with the project, and this would be similar to Variant 3. Intersections of Third Street with King and Townsend Streets would be affected; they would remain at LOS F, as with the project, but delays would increase. Variant 3A would eliminate the new significant emergency access impact found in Variant 3, although emergency access would be more difficult than for the project.

All significant impacts and mitigation measures identified for the project would also apply to this variant, except those described for the intersections of Berry Street with Seventh



**Street and except the Mitigation Measure at Fourth and King Streets that would be modified as for Variant 3.**

**Request for a Castle Metals Commercial Industrial/Retail Variant**

***Comments***

1900 Third Street LLC requests that a Variant be included in the EIR for the 1900 Third Street property. . .

The requested Variant would reflect a land use and zoning change from the proposed Mission Bay South Retail to Commercial Industrial/Retail. . .

In general, the concept for the Variant is to allow for the same mix of commercial industrial, research and development called for elsewhere in the Mission Bay Project Area, with the option of placing one or two city-serving retail stores in the ground floor and placing neighborhood-serving retail along the buildings' frontage. . .

As stated at the beginning of these comments (and see Part One of these comments), the 1900 Third Street LLC is requesting an EIR variant. The Variant would change the proposed land use and zoning for the 1900 Third Street site to Commercial Industrial/Retail. The 1900 Third Street LLC is also requesting that the Variant land uses and zoning are adopted as part of the approved Mission Bay South Redevelopment Plan. With the variant, please note that several of the maps and some of the data in the DEIR tables and text would be superseded by new data as part of the FSEIR. Since the DSEIR document itself would not be amended, these changes are not specifically cited. (*R. Clark Morrison, Morrison & Foerster L.L.P., representing 1900 Third Street L.L.C.*)

When this process began, it was expected that our site [1900 Third Street on Castle Metals site] would be designated for large-scale retail uses. Further analysis led us to conclude that a commercial/industrial/retail designation would be more appropriate. We have been working with staff to make this change in the redevelopment plan. With respect to the EIR, staff has suggested that we request a variant which analyzes our site as commercial/industrial/retail be prepared and included in the Final SEIR prior to the certification. We think this is a good approach. The variant will have fewer and less significant impacts than big box retail, and the commercial/industrial/retail uses on our site would be housed in several more articulated buildings, would generate almost 80 percent less P.M. peak traffic than retail and would be more compatible with surrounding uses.

Accordingly, we request that the Draft redevelopment plan be revised to show our property with commercial/industrial/retail designation and that the SEIR includes a variant with this designation for our site and adequate environmental analysis so that this designation can be shown in the final redevelopment plan. (*John Wilson, 1900 Third Street L.L.C., Mission Bay Citizens Advisory Committee*)

### **Response**

The comments request assessment of a new variant to the project analyzed in the SEIR that would change the proposed land use designation on the Castle Metals parcel on Third Street between 16th and Mariposa Streets from Mission Bay South Retail proposed in the Mission Bay South Redevelopment Plan to Commercial Industrial/Retail. Variant 5, the Castle Metals Block Commercial Industrial/Retail Variant, is presented and assessed below. Since the change is a variant in the SEIR analysis, no other tables, maps, or discussions in the Draft SEIR would require revision. Revising the Mission Bay South Redevelopment Plan to include the uses under this variant would be the responsibility of the Redevelopment Agency, separate from preparation of the SEIR.

The following has been added as the second bullet item on p. VII.1a:

- **Castle Metals Block Commercial Industrial/Retail Variant (Castle Metals Block Variant):** This variant would change the land use designation on the whole block containing Castle Metals from Commercial Industrial and Mission Bay South Retail to Commercial Industrial/Retail. The development program assumed for environmental analysis on the whole block would change from the 366,000 gross sq. ft. of Commercial Industrial, 310,000 gross sq. ft. of city-serving retail, and 3,200 gross sq. ft. of neighborhood-serving retail land uses under the project to 964,000 gross sq. ft. of Commercial Industrial, 50,000 gross sq. ft. of city-serving retail, and 3,200 gross sq. ft. of neighborhood-serving retail land uses under the variant. In addition, this variant would create a new height zone on a portion of the block fronting on Third and Mariposa Streets. It would permit development of up to 90 feet in height on 90% of the area and a (new) tower of up to 160 feet in height on 10% of the area. The rest of the block would remain in Height Zone 6.

Variant 5 has been added to Chapter VII as Section F, at the end of Variant 4 on p. VII.33, as follows.

## **F. VARIANT 5: CASTLE METALS BLOCK COMMERCIAL INDUSTRIAL/RETAIL VARIANT (CASTLE METALS BLOCK VARIANT)**

### **DESCRIPTION**

The Castle Metals Block Variant would change the proposed land use designation on the entire block bounded by 16th, Third, and Mariposa Streets, and the proposed Fourth Street. As shown in Figure III.B.3, p. III.9, and Figure V.A.6, p. V.A.30, the project proposes two land use designations on the Castle Metals Block: 1) Commercial Industrial in the area fronting 16th Street and the proposed Fourth Street alignment, and 2) Mission Bay South Retail in the other area fronting Third Street and Mariposa Streets. As shown



in Figure VII.F.1, the Castle Metals Block Variant proposes one land use designation for the entire block: Commercial Industrial/Retail.

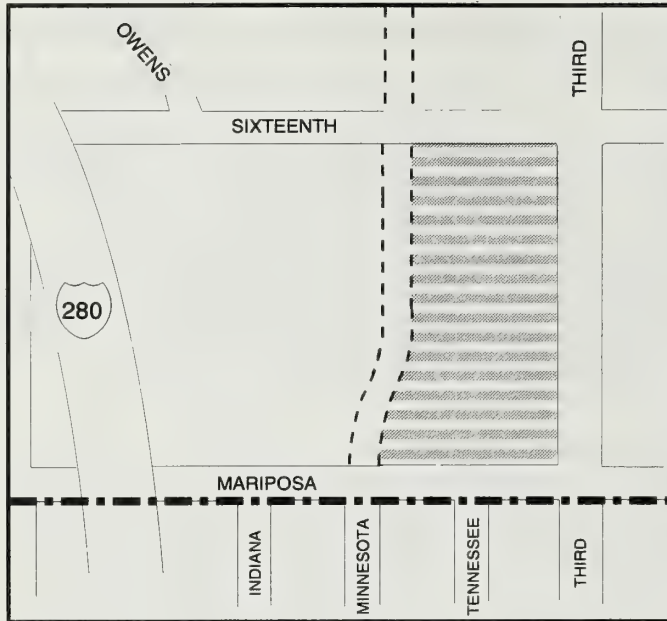
This variant also would change the allowable development program for the Castle Metals Block. The proposed project would permit up to 366,000 gross sq. ft. of Commercial Industrial, 310,000 gross sq. ft. of city-serving retail, and 3,200 gross sq. ft. of neighborhood-serving retail land uses on the block. The variant would permit up to 964,000 gross sq. ft. of Commercial Industrial, 50,000 gross sq. ft. of city-serving retail, and 3,200 gross sq. ft. of neighborhood-serving retail land uses on the block. The variant would not change the amount of allowable neighborhood-serving retail uses.

The variant assumes the following development program for the areas shown in Figure VII.F.1. For the area at 1900 Third Street bounded by Third Street and Mariposa Street, the project proposes 310,000 gross sq. ft. of city-serving retail while the variant assumes development of up to 560,000 gross sq. ft. of Commercial Industrial and 50,000 gross sq. ft. of city-serving retail. For the three parcels at the northeastern end of the block at the intersection of Third Street and 16th Street, this variant assumes development of up to 44,000 gross sq. ft. of Commercial Industrial uses. For the rest of the block (fronting the proposed Fourth Street) the project proposes 366,000 gross sq. ft. of Commercial Industrial uses and 3,200 gross sq. ft. of neighborhood-serving retail uses, and the variant proposes the same.

As with the proposed project, the principal land uses within the Commercial Industrial/Retail designation under the variant include light manufacturing, wholesaling, and offices, as well as retail and personal services. This variant assumes 50% of the commercial industrial uses within the Commercial Industrial/Retail land use designation would be light industrial or research and development, while 50% would be office, the same mix as under the project.

Under this variant, total Commercial Industrial development for the project as a whole would increase by about 11% (6,161,000 gross sq. ft. under the variant, compared to 5,557,000 gross sq. ft. under the project), while total city-serving retail development would decline 32% to 545,000 gross sq. ft., compared to 805,000 gross sq. ft. under the project.

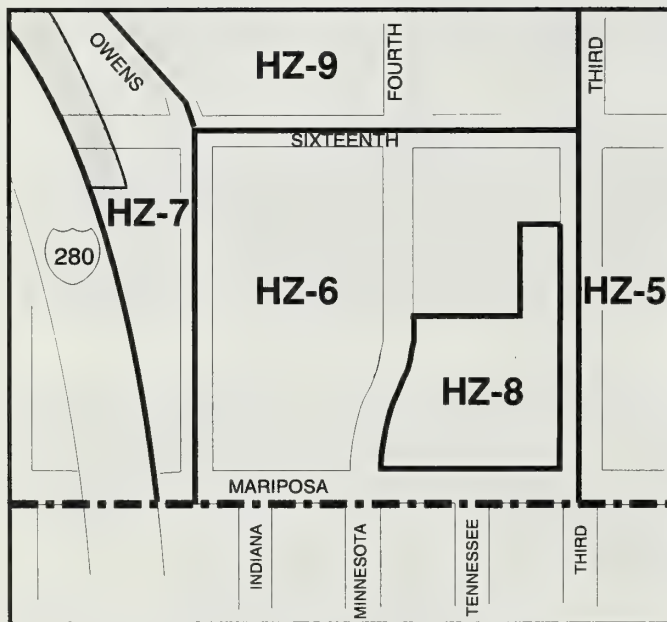
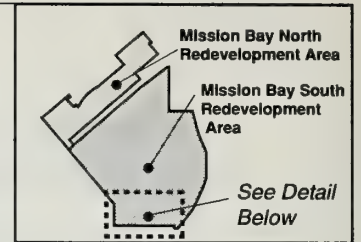
In addition, this variant would create a new height zone as shown in Figure VII.F.1, for the area fronting on Third and Mariposa Streets. The new height zone would allow development of up to 90 feet in height on 90% of the area and a tower of up to 160 feet in height on 10% of the area. The rest of the block would remain in Height Zone 6. The creation of the new height zone would add one allowable new tower to Mission Bay South in comparison to the proposed project. The new height zone would be HZ-8; the height zone covering UCSF would be renumbered HZ-9.



### PROPOSED CHANGE IN LAND USE DESIGNATIONS

- Commercial Industrial / Retail Land Use Designation
- Proposed Fourth Street Alignment

NOTE: See Figure III.B.3 for land use program in proposed Redevelopment Plans.



### PROPOSED HEIGHT ZONES FOR VARIANT

- HZ-0** Height Zone
- Building not to exceed freeway height for a minimum of 60% of the freeway frontage within 100 feet from the freeway

NOTE: See Figure III.B.5 and Table III.B.2 for additional detail on height zones.



Mission Bay Project Area

96555-8-6-98

SOURCE: EIP Associates, San Francisco Redevelopment Agency.

### MISSION BAY SUBSEQUENT EIR

**FIGURE VII.F.1(NEW) CASTLE METALS BLOCK COMMERCIAL INDUSTRIAL / RETAIL VARIANT:  
PROPOSED LAND USE DESIGNATIONS AND HEIGHT ZONES**



The primary vehicular access to the Castle Metals block would be from the proposed Fourth Street. Secondary access would be from Mariposa and 16th Streets.

## **ENVIRONMENTAL ISSUES**

As described below, the Castle Metals Block Variant would have the same significant impacts and require the same mitigation measures as the proposed project.

### **Plans, Policies, and Permits**

This variant would expand the area to be designated Commercial Industrial/Retail and reduce the area to be designated Mission Bay South Retail in the proposed Mission Bay South Redevelopment Plan. All other implications regarding plans, policies, and permits would be substantially the same as the proposed project.

### **Land Use**

The variant would increase the amount of Commercial Industrial uses in Mission Bay South, but would not introduce any uses not already proposed for the project. This variant would increase the developable area of land uses proposed in the West Subarea of the Project Area, but would not change the type. As with the project, Commercial Industrial uses in this portion of the Project Area generally would be compatible with other proposed project uses and with existing uses in the adjoining areas. The decrease in the amount of city-serving retail space in this portion of the Project Area would not substantially affect other proposed project uses or existing uses in adjoining areas.

### **Business Activity, Employment, Housing, and Population**

This variant would have more Commercial Industrial development and less city-serving retail development than the proposed project. Those differences in the types of building space in the West Subarea change estimates of Project Area employment. Compared to the proposed project, there would be about 750 fewer city-serving retail jobs, about 960 more office jobs, and about 700 more research and development or light industrial jobs.<sup>6/</sup> Overall, there would be about 910 more jobs in the Project Area under the Castle Metals variant. This would be 11% more jobs for the West Subarea and 3% more jobs for the Project Area overall.

The differences in building development and employment would not be large enough to make a difference in the conclusions made for the proposed project. Because there would be somewhat greater Project Area jobs and the same number of Project Area housing units, there would be more Project Area housing demand relative to supply with this variant than would be the case with the proposed project. Although relatively small, this variant's slight increase in the housing supply deficit could result in somewhat greater housing market impacts with the variant compared to the proposed project. As with the

project, the variant housing demand would not be a significant effect under CEQA./7/ However, the Mission Bay South Redevelopment Plan, Section 304.10, "Fees and Exactions: Parcels X2, X3 and X4", stipulates that all standard city fees and exactions would apply to the private property other than properties owned by Catellus, except as provided in an owner participation agreement when the public benefits exceed those of the City's standard fees or exactions. The City's OAHPP, or a housing exaction of equivalent or greater benefit, would apply to office development on the non-Catellus owned property on the Castle Metals block. Therefore, some additional housing supply would be forthcoming.

With a lesser amount of city-serving retail development in the Project Area, it would be more likely that other city-serving retail space would be developed in suitable locations of Nearby Areas to the south and west. Because there would still be substantial retail development elsewhere in the Project Area, the difference in impacts on development patterns between the Castle Metals Variant and the proposed project would be relatively small.

#### Visual Quality and Urban Design

Under this variant, views of the Castle Metals block bounded by Third Street and Mariposa Street would change from the proposed project's views of retail uses to views of office, light industrial, or research and development land uses. In contrast to the proposed project's height limit of 90 feet on the Castle Metals site, the new height zone would permit buildings up to 90 feet in height for 90% of the developable area and up to 160 feet in height for 10% of the developable area, allowing one additional tower (see the Variant 5 description above). As a result of the variant's change in type and height of land uses, views could be of more intense development with the variant than with the project.

Figure VII.F.2 schematically illustrates existing and potential views under the proposed project looking northwest from Third Street at 18th Street toward the southern Project Area boundary, from the perspective of the motorist or pedestrian. Similarly, Figure VII.F.3 schematically illustrates the same existing and potential views under this variant. The view does not illustrate the proposed extension of MUNI Metro light rail vehicle service in the Third Street median. As shown in the figures, foreground and street-level views with the variant would be dominated by mid- to high-rise buildings (extending up to 160 feet at certain locations). Views of the area are local, with none of the downtown. Views of development would partially obscure views of open sky presently available at this view point, thereby focusing more attention on the proposed development. Although new development would alter the scale and character of the area, as with the proposed project, this variant would not create any significant visual impacts because important scenic views from public areas would not be substantially degraded or obstructed.



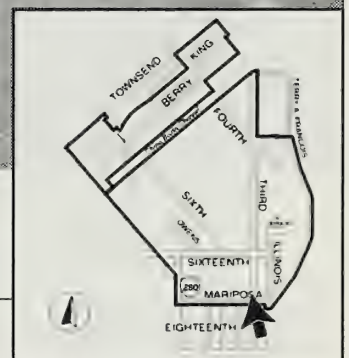


**Top:** Existing View Northwest from Third Street at 18th Street

**Bottom:** Potential View Northwest from Third Street at 18th Street with proposed project

SOURCE Square One Productions

NOTE The visual simulation illustrates general height and massing permitted under the variant, but does not necessarily represent maximum development at any particular location nor specific architecture or urban design



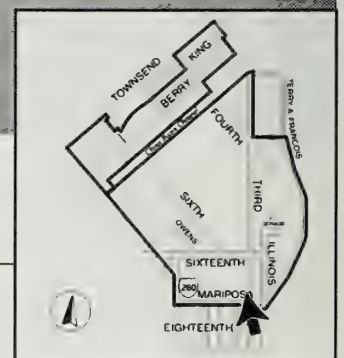
#### MISSION BAY SUBSEQUENT EIR

**FIGURE VII.F.2 (NEW) EXISTING AND POTENTIAL NORTHWEST VIEWS FROM THIRD STREET AT 18TH STREET FOR PROPOSED PROJECT**



**Top:** Existing View Northwest from Third Street at 18th Street

**Bottom:** Potential View Northwest from Third Street at 18th Street with Variant 5.



SOURCE Square One Productions

NOTE The visual simulation illustrates general height and massing permitted under the variant, but does not necessarily represent maximum development at any particular location nor specific architecture or urban design.

#### MISSION BAY SUBSEQUENT EIR

**FIGURE VII.F.3 (NEW) CASTLE METALS BLOCK COMMERCIAL INDUSTRIAL/RETAIL VARIANT:  
EXISTING AND POTENTIAL NORTHWEST VIEWS FROM THIRD STREET AT 18TH STREET**



## Transportation

The land uses in Variant 5 would generate approximately 1,320 fewer person trips than would the project during the p.m. peak hour, because city-serving retail generates a larger number of trips per unit area than the mix of uses proposed under this variant. In addition, a smaller portion of these person-trips would be made by automobile compared to the mode split of project land uses. Thus, Variant 5 would create about 570 fewer automobile trips during the p.m. peak hour. Table VII.F.1 compares the p.m. peak hour trip generation of Variant 5 to that of the project.

The smaller number of automobiles in the Mission Bay street network suggests that traffic and parking conditions would be slightly better under the variant compared with the proposed project. The total parking demand for Mission Bay under Variant 5 would be approximately 580 fewer spaces, or approximately 2% less than that estimated for the project. Table VII.F.2 compares some key intersection levels of service (LOS) under the variant with those of the project in the vicinity of the 1900 Third Street site. Operation of four of the seven intersections near the 1900 Third Street site would improve to some extent, with one intersection experiencing an improvement in level of service. No intersections projected to operate at LOS E or LOS F would improve to an acceptable level of service under the variant. This variant does not reduce impacts identified under the project below the level of significance.

The number of both inbound and outbound vehicle trips and inbound transit trips generated by the variant would be less than that created by the project, but the office, research and development, and city-serving retail uses would create approximately 50 more outbound total transit trips, 11 more inbound bicycle and pedestrian trips, and about 118 more outbound bicycle and pedestrian trips than the proposed project during the p.m. peak hour. The increase in non-automobile trips under this variant is far less than the relative decrease in automobile trips. The bicycle and pedestrian network would be able to accommodate the additional trips produced under this variant. The additional outbound transit trips created by these land uses represent less than a 1% increase compared to the total project. Some would use MUNI to travel to city locations, most would travel to the East Bay and South Bay; many of these additional transit riders would use MUNI to reach their primary transit carrier. Caltrain would have sufficient capacity to carry the individuals destined for the South Bay, and all of the additional East Bay passengers could be accommodated on BART with a less than 0.2% increase in the p.m. peak hour load factor compared with that for the project. The impact of the additional outbound transit trips would increase the load factor on Third Street light rail in the northbound direction in the vicinity of Mission Bay from 77% to 83%, but this would not be a significant impact. The load factor on Third Street light rail in the southbound direction would decrease slightly from 84% to 82%.

**TABLE VII.F.1**  
**PM PEAK HOUR PERSON TRIP GENERATION IN 2015**  
**VARIANT 5 COMPARED WITH PROJECT (new)**

| Area              | Variant 5     | Project       | Difference    |
|-------------------|---------------|---------------|---------------|
| Mission Bay North | 11,030        | 11,030        | 0             |
| Mission Bay South | <u>21,150</u> | <u>22,470</u> | <u>-1,320</u> |
| Total             | 32,180        | 33,500        | -1,320        |

Source: Wilbur Smith Associates

**TABLE VII.F.2**  
**YEAR 2015 INTERSECTION LEVEL OF SERVICE COMPARISON**  
**VARIANT 5 COMPARED WITH PROJECT (new)**

| Intersection                             | Project         |     | Variant 5       |     |
|--|-----------------|-----|-----------------|-----|
|  | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| 16 <sup>th</sup> and Seventh Streets     | 32.2            | D   | 32.9            | D   |
| 16 <sup>th</sup> and Fourth Streets      | 29.2            | D   | 30.8            | D   |
| 16 <sup>th</sup> and Third Streets       | 25.2            | D   | 22.0            | C   |
| Mariposa and I-280 on-ramp               | 16.6            | C   | 16.6            | C   |
| Mariposa and I-280 off-ramp/Owens Street | 35.9            | D   | 31.6            | D   |
| Mariposa and Fourth Streets              | 13.6            | B   | 11.9            | B   |
| Mariposa and Third Streets               | 23.7            | C   | 22.9            | C   |

Source: Wilbur Smith Associates

### Air Quality

As described below, the Castle Metals Variant would have the same significant air quality impacts and require the same air quality mitigation measures as the proposed project. The change in land use under Variant 5 would slightly alter traffic patterns and the number of vehicle trips in and around the Project Area. Vehicular emissions would be



reduced by 5%, compared with those of the proposed project. As shown in Table VII.F.3, vehicular emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> would exceed the BAAQMD significance thresholds for regional air quality impacts. Trip reduction measures discussed in Mitigation Measure E.47 in Section VI.E, Transportation, would not reduce emissions of criteria pollutants below these BAAQMD significance thresholds. Therefore, as under the project, these vehicular emissions would be an unavoidable significant regional air quality impact.

Due to the level of carbon monoxide emissions expected, three of the 13 intersections modeled for the proposed project were selected for analysis for this variant. The CO concentrations would be slightly lower for the variant than for the project (see Table VII.F.4).

In this variant, the decrease in overall traffic would slightly reduce toxic air contaminant emissions from mobile sources. Toxic air contaminants, such as various organic solvents associated with research and development and light manufacturing operations, would increase. The variant might result in about 11% more emissions of toxic air contaminants from stationary sources than the proposed project, due to the increase in research and development and light industrial uses under the variant. As under the project, combined emissions of toxic air contaminants would be an unavoidable significant impact.

#### Noise and Vibration

A comparison of the traffic estimated for this variant with that for the proposed project shows that the variant would have traffic volumes similar to or less than the proposed project at all of the noise study locations. The noise levels for one-hour L<sub>eq</sub> and 24-hour L<sub>dn</sub> would be substantially the same at all of the locations studied. All other noise and vibration issues discussed in Section V.G, Noise: Impacts, would remain substantially the same with this variant as for the proposed project.

#### Seismicity

The modification of the land use on the Castle Metals site under this variant would not alter the geologic, soils, or seismic conditions in the Project Area. The seismic hazards and potential effects that would occur in Mission Bay South would be similar to those discussed for the proposed project. The concentration of employees in an area designated as seismically hazardous would be somewhat higher on this specific site under the variant than under the project as proposed, but would not result in any new significant impacts or require additional mitigation.

**TABLE VII.F.3  
ESTIMATED VEHICULAR EMISSIONS  
FROM VARIANT 5 TRAFFIC IN 2015 (new)**

| <b>Pollutant</b>                          | <b>BAAQMD Threshold<br/>(lb/day)</b> | <b>Project<br/>(lb/day)</b> | <b>Variant 5<br/>(lb/day)</b> |
|---|--------------------------------------|-----------------------------|-------------------------------|
| Reactive Organic Gases (ROG)/a/           | 80                                   | 865                         | 830                           |
| Nitrogen Oxides (NO <sub>x</sub> )/a/     | 80                                   | 1,324                       | 1,270                         |
| Particulate Matter (PM <sub>10</sub> )/a/ | 80                                   | 1,968                       | 1,889                         |
| Carbon Monoxide (CO)/b/                   | 550                                  | 12,228                      | 11,738                        |

*Notes:*

- a. The BAAQMD regards this amount of emissions as a threshold of significance for a regional impact.
- b. For carbon monoxide, the BAAQMD does not regard 550 lb/day as a threshold of significance, but rather, an indicator to perform microanalysis (see text).

*Source:* EIP Associates. Based on modeling using the California Air Resources Board's URBEMIS model, version 5.

**TABLE VII.F.4  
ESTIMATED LOCAL CO CONCENTRATIONS AT  
SELECTED INTERSECTIONS IN 2015 FOR VARIANT 5 (new)**

| <b>Intersection</b>       | <b>Proposed Project (ppm)/a/</b> |                   | <b>Variant 5 (ppm)</b> |                   |
|---------------------------|----------------------------------|-------------------|------------------------|-------------------|
|                           | <b>One-Hour</b>                  | <b>Eight-Hour</b> | <b>One-Hour</b>        | <b>Eight-Hour</b> |
| Third and 16th Streets    | 11.0                             | 6.3               | 10.8                   | 6.2               |
| Third and King Streets    | 13.6                             | 7.6               | 13.2                   | 7.3               |
| Fourth and Bryant Streets | 8.3                              | 5.3               | 8.5                    | 5.3               |

*Notes:*

ppm = parts per million.

- a. Refer to Table V.F.5 and associated text in "Criteria Air Pollutants" under Section V.F, Air Quality: Impacts.

*Source:* EIP Associates.



## Health and Safety

This variant would increase the amount of Commercial Industrial space for the project as a whole by about 11%; therefore, hazardous materials quantities estimated for Commercial Industrial activities in “Estimated Hazardous Materials Quantities,” under “Hazardous Materials Use, Storage, and Disposal,” in Section V.I, Health and Safety: Impacts, would be about 11% greater. This could result in a roughly proportional increase in the magnitude of environmental impacts related to handling biohazardous materials, handling materials that pose substantial hazards of release or explosions, and generating hazardous wastes. With the reduction in retail space, there would be a reduction in hazardous waste associated with retail activities. The nature of these environmental impacts would be essentially the same as with the project, and, as with the project, would be reduced to a level of insignificance if the mitigation measures proposed for the project were implemented.

## Contaminated Soils and Groundwater

The 1900 Third Street site is discussed in Section V.J, Contaminated Soils and Groundwater, on p. V.J.40. As noted there, three site assessments have been performed for the Castle Metals site. These assessments show that underground storage tanks have been removed from the site, that soil samples from the site show the presence of metals and petroleum hydrocarbons, and that no specific potential off-site sources of contamination were identified. The assessments recommended no immediate action with regard to potential soil contamination and noted that the provisions of Article 20 of the San Francisco Public Works Code would apply to any actions disturbing more than 50 cubic yards of soil.

This variant would not change the results of the impacts analysis in Section V.J, Contaminated Soils and Groundwater in the SEIR, nor would it suggest that additional analysis should be carried out to account for the proposed change in use on the 1900 Third Street site. In summary, the analysis assumes that prior to development the property owner or developer for the 1900 Third Street site, as for all other sites in the Project Area, would prepare a Risk Management Plan or Plans (RMP) that would include measures to reduce any risks that might result from construction or from occupation and use of the sites. Various measures proposed to be included in the Risk Management Plan or Plans are listed in Section VI.J, Mitigation Measures: Contaminated Soils and Groundwater, on pp. VI.41-VI.45. Also, Article 20, Section 1000, *et seq.*, of the San Francisco Public Works Code would apply to the 1900 Third Street site, as it would to the remainder of the Project Area (see p. V.J.51), and its implementation would be coordinated with implementation of the RMP.

## Hydrology and Water Quality

The additional Commercial Industrial floor area and reduced retail space under this variant would have minor effects on the range and degree of hydrology and water quality

impacts described for the proposed project. The increase in Commercial Industrial space could increase the potential discharge of pollutants in wastewater associated with light industry, research and development, or similar activities. Similarly, the decrease in city-serving retail could decrease the discharge of pollutants associated with retail activities. The effects would be similar to those of the proposed project described in "Quality of Municipal Wastewater From the Project" and in "Evaluation of Potential Water Quality Impacts" in Section V.K, Hydrology and Water Quality: Impacts, and would require the same mitigation measures.

#### **Vegetation and Wildlife**

The changes in use on the Castle Metals site under the variant would not substantially alter the effects on the Channel or the Bay for the proposed project, as presented in Section V.L, China Basin Channel Vegetation and Wildlife: Impacts, and would require the same mitigation measures.

#### **Community Services and Utilities**

This variant would accommodate approximately 910 or 3% more jobs than the nearly 30,000 jobs forecast under the proposed project. An increase in projected employment of this size, and the changes in amount and type of use associated with this variant, would not cause an appreciable change in estimated project demand for community services or utilities or require additional mitigation.

#### **Growth Inducement**

The variant would create a small difference in potential development patterns for city-serving retail in Nearby Areas; more city-serving retail space would be expected to be developed in suitable locations of Nearby Areas to the south and west. Overall, the difference in Project Area jobs and in jobs/housing outcomes would not be substantial enough to result in different conclusions about the growth inducement implications of this variant compared with the proposed project. There would be no difference in cumulative citywide or regional growth.

### **SUMMARY OF MITIGATION MEASURES**

The significant impacts of this variant would be the same as those of the project. No additional mitigation measures have been identified.

The following endnotes have been added to p. VII.66:

6. The employment estimate for Commercial Industrial development under this variant assumes 50% of the Commercial Industrial space would be occupied by



office activities and 50% would be occupied by research and development and light industrial activities, consistent with the assumptions of the project analysis of Commercial Industrial development. While less actual office development is expected, the assumption of more office development is conservative for EIR analysis purposes because there are more employees and, consequently, more vehicle trips for office use than for research and development and light industrial.

7. As with the project, an imbalance of housing to jobs is not a physical environmental effect, but rather an economic and social issue that warrants attention by San Francisco policy makers and other jurisdictions in the Bay Area. Certain indirect project and cumulative effects caused by the imbalances in local employment and housing opportunities would be environmental impacts, primarily transportation and related air quality impacts, and are described in those sections of this SEIR. The geographic distribution of employment and housing is taken into account in the SEIR analysis. For example, commute patterns are considered in the trip distribution factors underlying the transportation and air quality impact analyses. The secondary physical impacts of the Project Area housing supply shortfall (i.e., significant traffic, transit, and air quality effects from both the project and project-plus-cumulative impacts), can be best mitigated through measures directly addressing those effects, such as those that encourage increases in transit use and reduce traffic congestion.

The following new text has been added after the second full paragraph on p. II.39 in the Summary:

#### **CASTLE METALS BLOCK COMMERCIAL INDUSTRIAL/RETAIL VARIANT (CASTLE METALS BLOCK VARIANT)**

Under Variant 5, the land use designation for the entire block bounded by 16th, Third, and Mariposa Streets (the Castle Metals Block) would be changed from Commercial Industrial and Mission Bay South Retail to Commercial Industrial/Retail. Under the project, the Castle Metals Block is assumed to have about 366,000 gross sq. ft. of Commercial Industrial, 310,000 gross sq. ft. of city-serving retail, and 3,200 gross sq. ft. of neighborhood-serving retail uses. Under the variant, the block is assumed to have about 964,000 gross sq. ft. of research, light-industrial, and office uses, 50,000 gross sq. ft. of city-serving retail, and 3,200 gross sq. ft. of neighborhood-serving retail uses. This would increase the amount of Commercial Industrial uses proposed in Mission Bay South. With less city-serving retail being developed in the Project Area, there could be more retail stimulated to the west and south of Mission Bay. A new height zone for the majority of the area would allow development up to 90 ft. high on 90%, and 160 ft. high on 10%, of the developable land area. The change in use would result in less peak-hour auto traffic in the southeastern part of the Project Area. However, no intersections projected to operate at unacceptable levels would improve to acceptable levels with the variant.

**Other environmental effects would be similar to those of the proposed project. The significant impacts of this variant would be the same as those of the project. No additional mitigation measures have been identified.**

### **Requested Discussion of Intersection Modification at King and Fourth Streets**

#### ***Comment***

Within the assumptions utilized for the ultimate circulation improvements under the project build-out scenario, Catellus requests that an eastbound left turn at the intersection of King and Fourth Street be analyzed. The provision of intersection improvements to accommodate left-turn movements onto 4th Street, as part of the project, may reduce traffic impacts at the King and Third Street intersection. If this assumption was not included in the traffic model for the project, we believe that additional study be undertaken to determine the effects, if any. (*Don Parker, Vice President, Bay Area Development, Catellus Development Corporation*)

#### ***Response***

The comment requests that an eastbound left turn at the intersection of King and Fourth Streets be analyzed because it may reduce traffic at the intersection of King and Third Streets. This left-turn lane is not proposed to be included in the Mission Bay North Redevelopment Plan at this time. It is analyzed in the response to this comment for informational purposes only.

Under this modification to the proposed project's street network, which the project sponsors are not currently considering, a new exclusive eastbound to northbound left turn lane on King Street would be provided at the intersection of Fourth Street. This new lane would allow some vehicles bound for the garage on the block bounded by Townsend Street, Third Street, King Street, and Fourth Street to turn right onto Townsend Street from Fourth Street, and then turn right into the parking garage. This change also would require converting the proposed project's exclusive right turn lane on King Street's eastbound approach to the Fourth Street intersection to a shared through-right turn lane. This second change is necessary so that the inside "through" lane can be converted to an exclusive left turn lane.

These geometric changes interrupt the continuation of the three through eastbound lanes on King Street with those on the opposite (east) side of the intersection. To correct this misalignment, the three through lanes must be gradually tapered over a length of 300 feet. The tapering of these lanes would intrude into the northwest corner of the block bounded by King Street, Third Street, Berry Street, and Fourth Street. The intrusion would reduce the space available for planned retail uses at that corner by approximately 1,200 gross sq. ft. The realignment would also require MUNI to shorten by approximately 5 feet its light rail platform currently planned on Fourth Street as part of the Third Street Light Rail Extension Project.



The shortening is necessary to avoid intruding into the southernmost east-west crosswalk across Fourth Street. In addition to providing the left turn movement onto Fourth Street, all traffic would need to be allowed to travel north on Fourth Street between King and Townsend Streets. Traveling north on this block is currently only allowed for MUNI buses. This change in the direction of travel would be a change both from existing conditions and proposed project conditions.

The intersection modifications would not change assessment in the SEIR of the proposed project's impacts for the following environmental topics: Plans, Policies, and Permits, Land Use, Visual Quality and Urban Design, Seismicity, Health and Safety, Contaminated Soils and Groundwater, Hydrology and Water Quality, Vegetation and Wildlife, Community Services and Utilities, and Growth Inducement. Although the intersection modifications would reduce retail employment by three employees, this change would not alter the business activity, employment, housing, and population assessment of the proposed project in the SEIR. However, such changes could affect transportation, air quality, and noise, and the effects in these areas are discussed below.

Providing an exclusive left-turn lane from eastbound King Street to Fourth Street would require that the portion of Fourth Street between King and Townsend Streets accommodate automobile traffic in the northbound direction. It is currently only legally used by MUNI vehicles. Allowing automobile traffic on this portion of Fourth Street, which is approximately 20 feet wide, would likely affect the efficiency of MUNI operations at this location. The 15-Third, 32-Embarcadero, and 91-Owl MUNI bus lines stop on this portion of Fourth Street, for which the entire curb length is designated as a bus stop. It is unlikely that MUNI operations would be effectively maintained on this section of Fourth Street if vehicular traffic were allowed to travel northbound. The existing bus stops could be relocated or combined with some of the other MUNI stops in the vicinity of the Caltrain terminal. This would require modifications to MUNI service, would increase the number of MUNI bus-miles and bus-hours, and could require one additional bus to maintain the additional schedule. Alternatively, Fourth Street could be widened by about 5 feet to the east to provide a total width of 26 feet that would accommodate two northbound lanes: a 14-foot-wide curb lane for buses and a 12-foot-wide lane for automobiles. An additional 1 foot of width could also be added to the east sidewalk. This second option would allow maintaining the existing bus stops along Fourth Street while sharing Fourth Street with northbound automobile traffic. Widening Fourth Street would reduce the developable area on the west end of the block bounded by Townsend, Third, King, and Fourth Streets by about 1,500 square feet.

The intersection of Fourth and King Streets was evaluated with the provision of an eastbound left turn lane under cumulative 2015 conditions. The eastbound left-turn lane would allow traffic traveling

eastbound on King Street to turn left at Fourth Street, and thereby would reduce the number of vehicles that would turn left at the intersection of Third and King Streets.

Table XII.14 compares the level of service of some key intersections under these conditions with those of the project. As indicated in the table, the average vehicle delays at the intersections of Third and Townsend Streets and Third and King Streets would improve by about 10 seconds per vehicle, but LOS would not be different from that of the project as a result of some vehicles turning left at the intersection of Fourth and King Streets to access the development block bounded by Townsend, Third, King, and Fourth Streets. Fourth and Townsend Streets would experience LOS C under this scenario versus LOS B under the project. The intersection of Fourth and King Streets would worsen from LOS E to LOS F, but could be mitigated to an acceptable level of service with the same mitigation measure proposed for the project (an additional southbound lane to provide one exclusive right-turn lane, one shared right-through lane, one exclusive through lane, and one exclusive left-turn lane; Mitigation Measure E.38, p. VI.20).

CO concentrations would be similar to those projected for the proposed project, based on an analysis of traffic volumes and Levels of Service for the intersections in the air quality study. No additional violations of the ambient air quality standards would be expected to occur as a result of the changes to the intersection of Fourth and King Streets.

**TABLE XII.14**  
**YEAR 2015 CUMULATIVE INTERSECTION LEVEL OF SERVICE COMPARISON,**  
**PROJECT COMPARED WITH MODIFIED FOURTH AND KING INTERSECTION**

| Intersection                | Project         |     | Modified Fourth/King |     |
|-----------------------------|-----------------|-----|----------------------|-----|
|                             | Delay (sec/veh) | LOS | Delay (sec/veh)      | LOS |
| Fourth and Townsend Streets | 14.4            | B   | 22.9                 | C   |
| Third and Townsend Streets  | 79.7            | F   | 70.5                 | F   |
| Fifth and King Streets      | 28.4            | D   | 28.3                 | D   |
| Fourth and King Streets     | 52.1            | E   | 67.0                 | F   |
| Third and King Streets      | 99.1            | F   | 88.0                 | F   |



The noise levels for one-hour  $L_{eq}$  and 24-hour  $L_{dn}$  would be substantially the same at all of the locations studied. A comparison of the traffic estimated for these intersection modifications with that for the proposed project shows that the modifications would have traffic volumes similar to or less than the proposed project at all of the noise study locations. All other noise and vibration issues discussed in Section V.G, Noise: Impacts, would remain the same with these modifications as for the proposed project.

The significant impacts of these intersection modifications would be the same as those of the proposed project. The proposed modifications to the King and Fourth Street intersection would have two adverse transportation effects. First, relocating the bus stops, one of the solutions developed in the transportation assessment above, would affect MUNI operations. The 5-foot widening of Fourth Street discussed in the transportation section would reduce impacts to a less-than-significant level. However, it would also diminish development potential of the adjacent Project Area parcel. Second, the change in cumulative LOS from C to F at the intersection of King Street and Fourth Street would be a further reduction compared to the LOS E predicted for the project.

If adopted and implemented for the intersection modifications, Mitigation Measure E.38 on p. VI.20 identified for the project could restore service at King and Fourth Streets to an acceptable level (an additional southbound lane to provide one exclusive right-turn lane, one shared right-through lane, one exclusive through lane, and one exclusive left-turn lane). The mitigation measures applicable to the project would also apply to these modifications, with the exception of project feature E.8a, which would need to provide an exclusive left turn lane instead of the exclusive right turn lane included in the project measure. Two additional project features are assumed to be included in these modifications and are assumed in the impacts analysis: 1) the northbound approach of Fourth Street to Townsend Street would be widened to provide an additional northbound lane; and 2) the east side of Fourth Street between King Street and Townsend Street would be widened to accommodate an additional northbound lane.

## OTHER STATUTORY SECTIONS

### Irreversible Environmental Changes

#### *Comment*

The Draft EIR's Vegetation and Wildlife Impact analysis (page V.L.10) acknowledges that the project would result in the replacement of a total of 5,880 square feet (0.13 acre) of northern coastal salt marsh (pickleweed) wetland habitat on the north bank of China Basin Channel and approximately 375 square feet (0.01 acre) of salt marsh on the south bank. The Draft EIR goes on to say that the loss of even a small amount of northern coastal salt marsh wetlands or other special aquatic sites would cause a net loss of wetland area and function, contrary to state and federal policies. However, the Irreversible Environmental Changes Section fails to mention anything about these losses of habitat resulting from the project. Despite Mitigation Measures L.2, even if Section 404 and 401 permits are granted by the U.S. Army Corps of Engineers, this existing habitat would be altered in the long-term. This change should be acknowledged in Section IX.B of the EIR. (*Kate White, Program Director, Urban Ecology, Inc.*)

#### *Response*

The comments raise concerns about the potential loss of wetlands and habitat on the north side of the Channel. As described on pp. V.L.10-V.L.11, northern coastal salt marsh wetlands and salt marsh wetland habitat would be disturbed or removed by the project. Without mitigation, these would be significant impacts. Mitigation Measures L.1 and L.2, if adopted, would mitigate these impacts to a less-than-significant level by requiring replacement of wetlands and habitat. Thus, the project impact is avoidable and should not be included in the list of irreversible environmental changes.

Further information regarding wetland and habitat impacts is presented in the responses in Vegetation and Wildlife, "Edge Treatments and Loss of Wetlands" and "Wetlands Impacts" on pp. XII.408-XII.410 and pp. XII.431-XII.432, respectively.



## D. STAFF-INITIATED TEXT CHANGES

This section presents staff-initiated text changes for the Mission Bay Draft SEIR. Changes related to the rescission of the 1990 Mission Bay Plan are presented first. These changes occur in four chapters of the Draft SEIR, but they are grouped together so that the reader can review all the revisions pertaining to this topic. Subsequent changes are grouped by chapter and, where a further level of detail is helpful, by section, and follow the order of the SEIR. In a few instances, a change for a particular chapter is presented in the context of related revisions rather than under its chapter or section heading. Cross-references by page number are provided for these revisions.

### RESCISSION OF THE 1990 MISSION BAY PLAN

Subsequent to the publication of the Mission Bay Draft SEIR, the San Francisco Planning Department identified a slightly modified approach to amending the 1990 Mission Bay Plan and Article 9 of the City Planning Code. In the Draft SEIR, it was stated that to maintain consistency between the Redevelopment Plans and the San Francisco General Plan, one of the necessary actions would be to amend the 1990 Mission Bay Plan and Article 9 to excise the areas now included in the Redevelopment Plans. Instead, the 1990 Mission Bay Plan would be rescinded and re-adopted as Mission Bay Guidelines for the three blocks that were part of the 1990 Mission Bay Plan but which would not be covered by the Redevelopment Plans (as described on p. V.A.6 and presented in Figure V.A.1). Article 9 of the City Planning Code would also be amended to apply to those three blocks only. All references to the 1990 Mission Bay Plan in Article 9 would be revised to refer to the Mission Bay Guidelines.

The last sentence on p. II.1 has been revised to read:

**The San Francisco General Plan (including the ~~Mission Bay Plan and the Central Waterfront Area Plan~~), the Waterfront Land Use Plan, and the San Francisco Planning Code and Zoning Map would be amended to conform with the proposed Redevelopment Plans; the ~~Mission Bay Plan, Part II of the Central Waterfront Area Plan,~~ would be rescinded.**

The second-to-last paragraph on p. II.5 has been revised to read:

**To maintain consistency between the Redevelopment Plans and San Francisco's General Plan, the General Plan would be amended. ~~most importantly The 1990 Mission Bay Plan (Part II of the Central Waterfront Area Plan), would be rescinded and re-adopted as~~ Mission Bay Guidelines for the parcels not covered by the Redevelopment Plans. as would Article 9 of the San Francisco Planning Code would be amended to apply to those parcels only.**

The last sentence on p. III.1 has been revised to read:

**The San Francisco General Plan (~~including the Mission Bay Plan and the Central Waterfront Area Plan~~), the Waterfront Land Use Plan, and the San Francisco Planning Code and Zoning Map would be amended to conform with the proposed Redevelopment Plans; the Mission Bay Plan, Part II of the Central Waterfront Area Plan, would be rescinded.**

The last sentence on p. III.42, which continues on the following page, has been revised to read:

**The 1990 Mission Bay Plan, which is Part Two of the Central Waterfront Area Plan, ~~and would be rescinded and re-adopted as Mission Bay Guidelines for the parcels not covered by the Redevelopment Plans.~~ Article 9 of the City Planning Code, which details zoning and land use controls for Mission Bay, would be amended ~~with respect to~~ to exclude the Mission Bay North and Mission Bay South Redevelopment Areas.**

The second sentence of the second paragraph of p. III.46 has been revised to read:

**Accordingly, the project would require the Planning Commission and the Board of Supervisors to ~~amend~~ rescind the 1990 Mission Bay Plan and amend Article 9 of the City Planning Code, and to adopt any required amendments to the General Plan to ensure conformity with the proposed project.**

Under the heading Planning Commission on p. III.47, the third item has been revised to read:

- **Adopts and recommends to the Board of Supervisors amendments to the General Plan, including rescission of the 1990 Mission Bay Plan. Approves its re-adoption as Mission Bay Guidelines for the parcels not covered by the Redevelopment Plans.**

Under the heading Board of Supervisors on p. III.48, the third item has been revised to read:

- **Adopts General Plan amendments, including ~~amendments to~~ rescission of the 1990 Mission Bay Plan.**

The first full sentence of first paragraph on p. V.A.28 has been revised to read:

**For the Project Area, the Mission Bay Plan is proposed to be ~~amended~~ rescinded and replaced in the General Plan by reference to the Redevelopment Plans for Mission Bay North and Mission Bay South, to establish conformity between the General Plan and the Redevelopment Plans.**

The first sentence of the second paragraph on p. V.A.28 has been revised to read:

**~~Amendment~~ Rescission of the 1990 Mission Bay Plan and amendment of Article 9 would need to be approved by the Planning Commission and adopted by the Board of Supervisors. The Mission Bay Plan would be re-adopted by the Planning Commission as Mission Bay Guidelines which would pertain to the parcels not covered by the Redevelopment Plans.**



The third sentence of the last paragraph on p. V.A.33 has been revised to read:

**To make the *San Francisco General Plan* and the *Redevelopment Plans* consistent, the *Mission Bay Plan*, i.e., Part II of the *Central Waterfront Plan*, would be ~~amended to apply to the properties currently contained in the *Mission Bay Plan* that are~~ rescinded and re-adopted by the Planning Commission as Mission Bay Guidelines for those parcels that were part of the 1990 Mission Bay Plan, but which are not included in the Project Area.**

The second sentence of the second paragraph on p. VIII.54 would be revised to read:

**Adoption would require ~~amendments to~~ rescission of the 1990 *Mission Bay Plan* and amendments to Article 9 of the City Planning Code and Zoning Map.**

## CHAPTER II, SUMMARY

The subhead "Transit" has been added after the second full paragraph on p. II.11.

The third and fourth paragraphs on p. II.36 have been revised as follows:

**This chapter evaluates ~~four~~ six variants to the project, and a combination variant, that are under consideration by the project sponsors. Variants typically modify one limited area or aspect of the project.**

**Each variant is available for selection by the project sponsors, the City, and the public, and any combination of variants could be approved. Even if all variants were to be adopted, no new significant impacts other than those identified below for each variant would occur, because the variants ~~under consideration by the project sponsors~~ are not substantially different than the project and are geographically separated.**

The following sentence has been added as a new second sentence in the first full paragraph on p. II.38 in the discussion of transportation effects of Variant 3, and the existing second sentence in that paragraph has been modified:

**The intersection of King and Fifth Streets would operate at LOS E under this variant, compared with LOS D under the project, creating a new significant impact. The intersections of Third and Fourth Streets with King and Townsend Streets would ~~be most also be~~ affected; they would remain at LOS F, as with the project, but delays would increase by 10% to 50%.**

A change has been made to the Summary under "Schools" in Community Services and Utilities, shown on p. XII.520.

The second and third complete paragraphs on p. II.17 of the Draft SEIR were duplicates of the paragraphs above them. This duplicate text has been eliminated, and subsequent pages have been repaginated.

In addition to the revisions listed here, the Summary has been updated to reflect changes made to the Draft SEIR in this Summary of Comments and Responses document.

### **CHAPTER III, PROJECT DESCRIPTION**

A revision to p. III.6 is presented later in this section under "Combination of Variants Currently Under Consideration by the Project Sponsors" on p. XII.530.

The following Section D has been added to the end of Chapter III, Project Description on p. III.52.

#### **D. VARIANTS TO THE PROJECT**

**Chapter VII of this document describes and evaluates variants to the project that the project sponsors have considered. Variants typically modify limited areas or aspects of the project and have substantially the same impacts and cumulative impacts, except where noted. Section G in Chapter VII analyzes a combination of those variants currently under consideration by the project sponsors.**

### **CHAPTER IV, BACKGROUND AND SEIR STUDY APPROACH**

New Endnote 13 has been added after the second sentence in the last paragraph on p. IV.7. The subsequent endnotes have been renumbered. The following has been added as the text of new Endnote 13.

- 13. Since publication of the Draft SEIR, an environmental review application has been received by the Planning Department for 185 Berry Street, proposing a three-story addition to the existing China Basin Landing office building that would add about 170,000 square feet of office space. The site is the northerly portion of a parcel consisting of the entire block bounded by Fourth Street, Berry Street, Third Street, and China Basin Channel. The resulting building would be similar in size and bulk to the existing wharfside office building on the same parcel to the south, bordering the north side of China Basin Channel. The site is bordered on its Berry Street and Fourth Street sides by the Project Area, and across Third Street by the Giants ballpark site.**

**The SEIR's transportation and other analyses of Mission Bay project impacts do not assume this specific development project. The SEIR analyses do assume, for cumulative impact assessment purposes, considerable additional office and other development in the area. The assumptions of cumulative growth are based on ABAG projections of population and employment, adjusted to account for anticipated potential major projects in San Francisco, as described on pp. V.E.38-V.E.39. Therefore, transportation and other cumulative impacts associated with 185 Berry Street and other development projects that will accommodate future population and**



employment growth are included in the SEIR cumulative analyses, based on the forecast general locations for such growth.

Individual projects, such as 185 Berry Street, may have location-specific impacts not accounted for in the SEIR analysis. Such location-specific impacts are not possible to predict with certainty, since detailed project features, transportation plans, and mitigation measures for the specific project will emerge and evolve as environmental analysis is conducted for that project. The environmental review documents for 185 Berry Street and other future projects will analyze and describe any such specific impacts, using the cumulative future scenario in this SEIR as the 2015 baseline. Those future documents would also suggest applicable mitigation measures in the event significant project-specific impacts are found.

## CHAPTER V, ENVIRONMENTAL SETTING AND IMPACTS

### Section V.E, Transportation

Figure V.E.8, on p. V.E.42 of the SEIR, has been revised to clarify that under the project, the northbound lane on Fourth Street would continue to be for MUNI use only (the revised figure is shown on the following page).

The third and fourth sentences in the fifth paragraph on p. V.E.11 have been revised to read:

**Midday service headways are 30 minutes on all lines between Marin and Sonoma Counties and San Francisco. The UCSF Club Bus service includes six routes, each with one daily round trip, serving originating in Ignacio, Santa Rosa, San Rafael, Fairfax, Tiburon, and Rohnert Park.**

The first sentence in the second paragraph on p. V.E.12 has been revised to read:

**The total average weekday ridership on GGT bus service to and from San Francisco (excluding Club Bus service) is estimated to be approximately 21,000 passengers per day, with about 6,705 of those trips being made during the p.m. peak hour./25/**

The subhead and first sentence of the last paragraph on p. V.E.12 have been changed to delete references to the Red & White ferry service, as Red & White provides bay cruises only, and to add the names of other commuter ferry services:

#### **Other Blue & Gold and Red & White Ferry Services**

**The Blue & Gold and Red & White fleets, Vallejo Baylink, Oakland/Alameda and Harbor Bay ferries operate ferry service between San Francisco and Alameda/Oakland, Vallejo, Sausalito, Tiburon, and Angel Island.**

The last sentence in the first partial paragraph on p. V.E.13 has also been changed to delete references to the Red & White fleet and add other ferry services:

**All Blue & Gold and ~~Red & White~~, Vallejo Baylink, Oakland/Alameda, and Harbor Bay ferry services have adequate capacity to accommodate their current passengers during the p.m. peak hour./26/**

The following new sentence has been added to the end of the first full paragraph on p. V.E.41:

**An additional northbound lane would be provided at the intersection of King and Third Streets, and Fourth Street would be widened between King and Berry Streets.**

The word “circle” has been replaced with “roundabout” in Section V.E, Transportation: Impacts and in Appendix D, Transportation.

On p. V.E.41, the last sentence has been changed to read:

**The project proposes an at-grade automatic-gated crossing of the Caltrain tracks to connect North Common and South Common Streets and Owens Street with Seventh Street west of the ~~circle~~ roundabout./54/**

In Appendix D, Transportation, on p. D.18, the last sentence on the page, carrying over to p. D.19 has been revised to read:

**North Common and South Common Streets would consist of two parallel east-west one-way roadways separated by an approximately 130-foot-wide grassy area, on the north side of the UCSF site, running from Terry A. François Boulevard to the ~~circle~~ roundabout intersection and the Seventh Street connector.**

The following sentence has been added at the end of the first paragraph on p. V.E.53 to clarify the relationship of the SEIR MUNI information to that found in the *Third Street Light Rail Project DEIS/DEIR* :

**These MUNI service changes are consistent with the assumptions contained in the *Third Street Light Rail Project DEIS/DEIR*./64a/**

The following new endnote is added to the Transportation endnotes after note 64 on p. V.E.123:

**/64a/ San Francisco Planning Department and Federal Transit Administration, *Third Street Light Rail Project DEIS/DEIR*, State Clearinghouse #96102097, Planning Department File No. 96.281E, April 3, 1998, pp. 2-8 to 2-12 and 3-7.**



### ***Response***

Comments suggest that there is no funding for the construction of the King Street westbound frontage road, that provision of the frontage road would require taking Caltrain property, and that this would impact Caltrain's operating and maintenance expenses, as well as its ability to provide reliable service.

The provision of the westbound King Street frontage road is part of an agreement between the City and County of San Francisco, Caltrans, and the Peninsula Corridor Joint Powers Board (JPB), which was created as part of the I-280 Transfer project and the Waterfront Transportation Project. The City and County of San Francisco has the responsibility to assure that the street is constructed. Although the early planning phases of the project included both the eastbound and westbound frontage roads, the eastbound frontage road was eliminated because of accessibility and safety considerations, and it was replaced with roadway improvements on Berry and Fifth Streets. As part of the proposed infrastructure plan for the project, Catellus would be responsible for funding and constructing the King Street westbound frontage road. Therefore, the fourth sentence of the first full paragraph on p. V.E.41 has been modified as follows:

**It [Berry Street] would also connect with the planned westbound King Street frontage road to be built by Catellus ~~the City~~ on the north side of the I-280 ramps structure.**

Peninsula Corridor JPB staff have been working with city staff on the Waterfront Transportation Projects including construction of the westbound King Street road. They have reached an agreement that involves upgrade and relocation of some track maintenance facilities (e.g., regarding sand and fuel supplies), rehabilitation of four tracks, and an easement exchange./7/ This agreement is expected to be presented to the Peninsula Corridor JPB for approval in September 1998.

### **Channel Bridges**

#### ***Comment***

The drawbridge operating regulations for the 3rd and 4th Street Bridges are included as 33 CFR 117.149 (encl. 4). In correspondence regarding related projects in the China Basin area, we have expressed our belief that overland traffic can be accommodated under the existing regulations without additional restrictions on waterway traffic. (*W.R. Till, Chief, Bridge Section, U.S. Coast Guard*)

### ***Response***

On p. V.E.72, the SEIR discusses the impacts associated with the operation of the Peter Maloney and Lefty O'Doul Bridges. The SEIR notes that the number of typical daily lifts is not expected to measurably affect the transportation circulation patterns in and near the Mission Bay Project Area, but

acknowledges that some vehicles will be delayed while the bridges are lifted. Although it was not explicitly stated, the determination that traffic circulation patterns would not be modified by the bridge operations was based on the assumption of typical lift operation procedures. Therefore, efforts to achieve effective circulation of Mission Bay traffic would not impose any additional restrictions on the operation of the Peter Maloney and Lefty O'Doul Bridges.

## **Transit**

### **MUNI**

#### **Light Rail Extension**

##### ***Comment***

Page V.E.51: Light Rail Extensions: The DEIR claims that the future 2015 transit analysis is based upon operation of the Third Street Light Rail corridor as an extension of the J-Church line. However, MUNI's Third Street Draft EIS/EIR proposes to also extend the N-Judah line as far as Third and Mariposa Streets, explicitly to serve the Mission Bay development. According to page 2-39 of the MUNI DEIS/DEIR, fully ten vehicles of a total Third Street requirement of 25 streetcars—(40%)—would be required for this Mission Bay-exclusive service. This is a significant operational and financial (10 times \$3.7 million/vehicle) impact on the Municipal Railway, which is at present and for the foreseeable future unable to provide adequate levels of service on its existing network. (*Richard Mlynarik*)

##### ***Response***

The comment notes that the additional ten light rail vehicles that would be required to provide the extension of N-Judah service to Mariposa Street would be a significant operational and financial impact on the Municipal Railway.

On pp. VI.28-VI.29, the SEIR discusses MUNI's inability to accommodate the expected northbound ridership on the MMX and Third Street light rail in year 2015. The SEIR notes that the mitigation measure which MUNI has found to be the most cost-effective calls for extending the N-Judah service from the Embarcadero station to the Mariposa Third Street light rail station to serve the Mission Bay Area (Mitigation Measure E.45, p. VI.28). Implementation of this mitigation measure would require ten additional light rail vehicles. With this mitigation measure, MUNI is expected to operate at 67% of capacity during the p.m. peak hour. The *Third Street Light Rail Project DEIS/DEIR* indicates that the capital cost estimate for this mitigation measure would be \$38,000,000, or about 10% of the total estimated capital cost of the Initial Operating Segment of the Light Rail Project (Table 7-10, p. 7-17). The Mission Bay SEIR acknowledges that a funding source for this mitigation measure has not yet



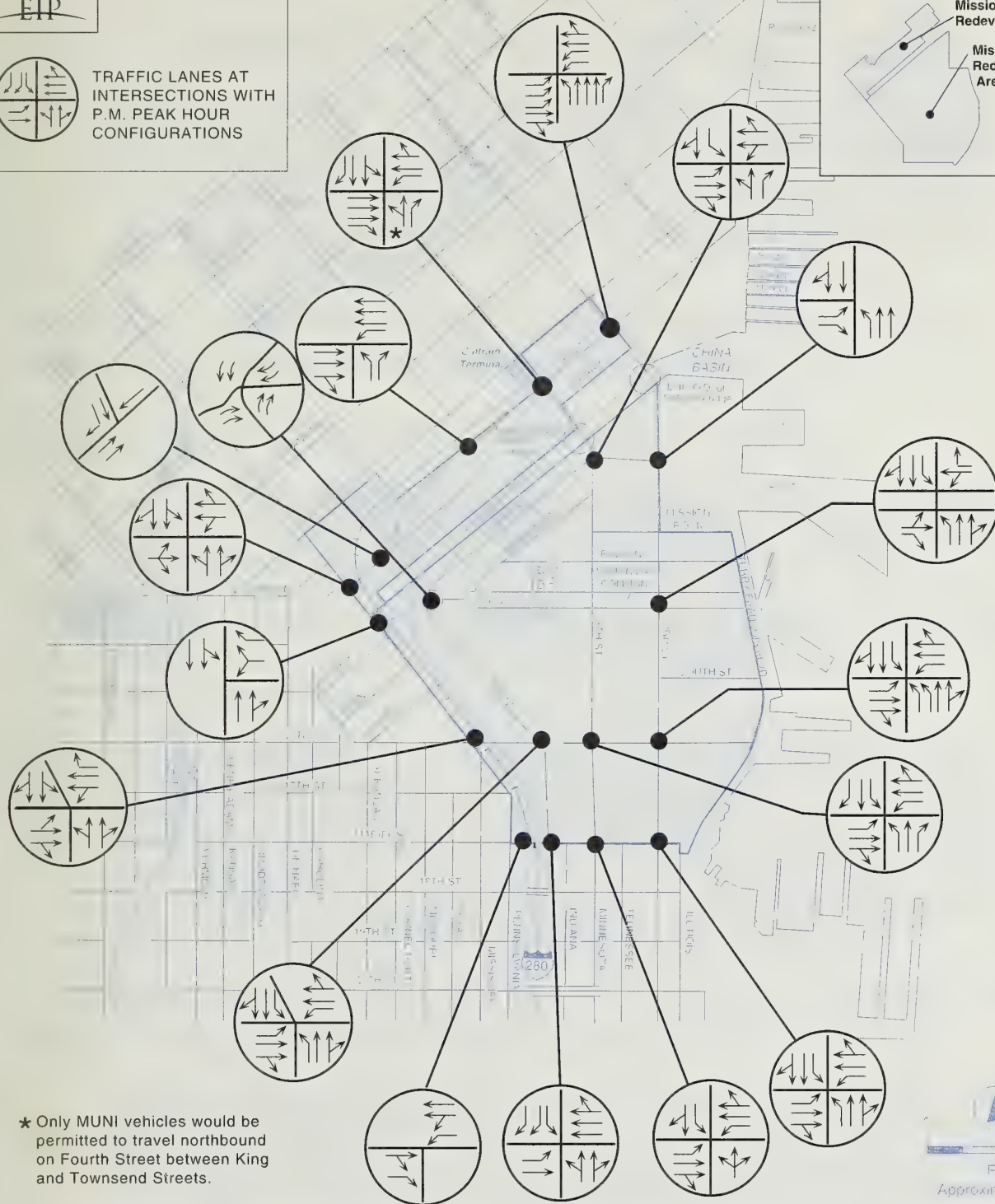
~~EIP~~



### TRAFFIC LANES AT INTERSECTIONS WITH P.M. PEAK HOUR CONFIGURATIONS

Mission Bay North  
Redevelopment Area

**Mission Bay South  
Redevelopment  
Area**



- \* Only MUNI vehicles would be permitted to travel northbound on Fourth Street between King and Townsend Streets.

Feet  
Approximate Scale

**SOURCE:** Wilbur Smith Associates

## MISSION BAY SUBSEQUENT EIR

**FIGURE V.E.8 (REVISED) PROPOSED NEW TRAFFIC CIRCULATION SYSTEM AND INTERSECTION LANE CONFIGURATION**





Similarly, the second sentence in the last paragraph on p. V.E.92 has been revised to read:

**On the other hand, MUNI, in response to expected increases in Mission Bay transit demand, ~~and~~ in accordance with the prior Mission Bay development plan, and consistent with the assumptions in the Third Street Light Rail Project DEIS/DEIR, plans to extend about 50% of the present 30-Stockton or 45-Union/Stockton trolley coaches south from their current terminus at the Caltrain terminal to somewhere in the vicinity of Third Street and 19th or 20th Streets.**

Several column headings in Table V.E.11 on p. V.E.79 have been revised to read “Charter or Subscription Bus,” “Golden Gate Transit Buses,” and “Golden Gate Transit Ferry.”

The last sentence in the first paragraph on p. V.E.83 has been expanded to read:

**Although not all GGT bus routes have the same passenger loads during the p.m. peak hour, On average only 70% of the capacity is currently used; thus, the impact of these additional passengers would be minimal.**

The subhead and first three sentences under “Charter Bus” on p. V.E. 83 have been revised as follows:

#### **Charter/Subscription Bus**

**Charter and subscription buses are anticipated to be used primarily by employees traveling to/from the office space and research and development facilities in Mission Bay South. Charter and subscription buses would provide service to the South Bay, East Bay, and North Bay, combining to comprise approximately 160 transit trips of the Mission Bay project p.m. peak hour transit demand. The Golden Gate Transit “club” buses discussed under “Existing Regional Transportation Facilities” in the Setting subsection, under “Golden Gate Transit,” are examples of ~~charter, or subscription,~~ buses.**

The first paragraph on p. V.E.88, beginning with the second sentence under “Golden Gate Transit,” has been expanded to provide additional qualitative information about peak loads:

**Because on average only 70% of current capacity is used on Golden Gate Transit buses during the p.m. peak hour, the 0.68% annual growth in cumulative ridership, including Mission Bay-generated trips, is estimated to increase the average p.m. peak hour load factor to 85%, assuming capacity remains the same. Not all GGT bus routes have the same passenger loads during the p.m. peak hour, with some carrying more passengers than others. It is assumed that the future allocation of buses to routes and the establishment of future bus route headways could be done by GGT in such a manner that the average future cumulative load factor of 85% would be redistributed without exceeding 100% on any given bus route.**

The following is added as new fifth sentence in the second paragraph on p. V.E.88:

**As stated in note p. in Table V.E.13, a new, 325-seat ferry boat is expected to be added to the Larkspur Ferry service in the fall of 1998.**

The first sentence in the third paragraph on p. V.E.88 has been revised to read:

**No project-related trips were assigned to private ferries such as the ~~Red & White and Blue & Gold Fleets~~, Vallejo Baylink, Oakland/Alameda, and Harbor Bay ferries.**

The reference to Table X.D.5 in the last line of Endnote 35 on p. V.E.122 has been corrected to Table X.C.5.

### **Section V.F, Air Quality**

Tables V.F.1 and V.F.2 should have listed lead as a criteria pollutant. Tables V.F.1 and V.F.2 have been amended and are reprinted here.

In Endnotes 6 and 7 on p. V.F.45, the date has been changed from September 1993 to August 1993.

Endnote 46 on p. V.F.47 has been revised as follows:

BAAQMD, ~~Toxics Inventory Report~~ Toxic Air Contaminant Control Program Annual Report 1995, Volume I, November 1996, p. 21.

Endnote 47 on p. V.F.47 has been revised as follows:

BAAQMD, ~~Toxics Inventory Report~~ Toxic Air Contaminant Control Program Annual Report 1995, Volume I, November 1996.

### **Section V.H, Seismicity**

The date in Endnote 27 on p. V.H.22 has been changed from October 24, 1996 to October 24, 1994.

### **Section V.J, Contaminated Soils and Groundwater**

Endnote 144 on p. V.J.110 has been corrected to read ENVIRON International Corporation.



TABLE V.F.1 (revised)  
FEDERAL AND STATE AIR QUALITY STANDARDS

| Pollutant                              | Averaging Time          | California Standard/a/                         | Federal Standard/b/                            |
|--|-------------------------|--|--|
| Ozone                                  | 1-hour                  | 0.09 ppm                                       | 0.12 ppm                                       |
| Carbon Monoxide                        | 1-hour                  | 20.00 ppm                                      | 35.00 ppm                                      |
|  | 8-hour                  | 9.00 ppm                                       | 9.00 ppm                                       |
| Nitrogen Dioxide                       | 1-hour                  | 0.25 ppm                                       | —  |
|  | Annual Average          | —  | 0.053 ppm                                      |
| Sulfur Dioxide                         | 1-hour                  | 0.25 ppm                                       | —  |
|  | 3-hour                  | —  | 1,300 $\mu\text{g}/\text{m}^3$                 |
|  | 24-hour                 | 0.04 ppm                                       | 365 $\mu\text{g}/\text{m}^3$                   |
|  | Annual Average          | —  | 80 $\mu\text{g}/\text{m}^3$                    |
| Particulate Matter (PM <sub>10</sub> ) | 24-hour                 | 50 $\mu\text{g}/\text{m}^3$                    | 150 $\mu\text{g}/\text{m}^3$                   |
|  | Annual Geometric Mean   | 30 $\mu\text{g}/\text{m}^3$                    | —  |
|  | Annual Arithmetic Mean  | —  | 50 $\mu\text{g}/\text{m}^3$                    |
| <u>Lead</u>                            | <u>30 Day Average</u>   | <u>1.5 <math>\mu\text{g}/\text{m}^3</math></u> | <u>—</u>                                       |
|  | <u>Calendar Quarter</u> | <u>—</u>                                       | <u>1.5 <math>\mu\text{g}/\text{m}^3</math></u> |

*Notes:*

ppm = parts per million by volume  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter  
 — = No standard in this category

- California standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter (PM<sub>10</sub>) are values that are not to be exceeded.
- National standards, other than for ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is “not exceeded” when the expected number of days per calendar year with maximum hourly average concentration above the standard is equal to or less than one.

Source: EIP Associates.

**TABLE V.F.2 (revised)**  
**HEALTH EFFECTS SUMMARY OF THE MAJOR CRITERIA AIR POLLUTANTS**

| <b>Air Pollutant</b>                    | <b>Adverse Effects</b>   |
|---|--|
| Ozone                                   | Eye irritation. Respiratory function impairment.   |
| Carbon Monoxide                         | Impairment of oxygen transport in the bloodstream, increase of carboxyhemoglobin. Aggravation of cardiovascular disease. Impairment of central nervous system function. Fatigue, headache, confusion and dizziness. Can be fatal in the case of very high concentrations in enclosed places. |
| Nitrogen Dioxide                        | Risk of acute and chronic respiratory illness.   |
| Sulfur Dioxide                          | Aggravation of chronic obstruction lung disease. Increased risk of acute and chronic respiratory illness.  |
| Particulate Matter (PM <sub>10</sub> )  | Increased risk of chronic respiratory illness with long exposure. Altered lung function in children. With SO <sub>2</sub> , may produce acute illness.   |
| Particulate Matter (PM <sub>2.5</sub> ) | May be inhaled and possibly lodge in and/or irritate the lungs. <u>Same adverse effects as PM<sub>10</sub>.</u>  |
| <u>Lead</u>                             | <u>Gastrointestinal and central nervous system effects in adults. Anoxeria, vomiting, malaise, convulsions, and possibly, permanent brain damage, in children.</u>   |

*Source:* Bay Area Air Quality Management District Air Quality Handbook, 1993; Zannetti, Paolo, *Air Pollution Modeling*, 1990; The Merck Index, 10th ed., 1983.

## **Section V.K, Hydrology and Water Quality**

### Water Quality Tables

Several revisions have been made to the Hydrology and Water Quality SEIR tables (Tables V.K.2-V.K.4 and V.K.6-V.K.8). In most cases, calculated spreadsheet values were either not rounded correctly for the SEIR tables or were not properly transferred to the SEIR tables when the final spreadsheet calculations were made for the SEIR. Changes to the tables are shown on the following pages (revisions are underlined). Other revisions are explained in more detail below. None of the revisions necessitates changes to the SEIR text, nor do they affect the analysis or conclusions of the SEIR.

In Table V.K.2, on p. V.K.35, the TSS values are overstated by about twice the actual value because an incorrect value for TSS load was entered in the spreadsheet that calculated the load to the Bay from effluent discharge. The daily load value entered in the spreadsheet (10,848 kg/day) came from the



same source cited in the table, but was taken from loading data from a single month, December. The correct daily load value is 4,530 kg/day, which is the daily load averaged over the entire 1997 year. The TSS load has been recalculated and changes have been made.

The 1997 monitoring report reported an average daily concentration value of  $<0.18 \mu\text{g/l}$  for polynuclear aromatic hydrocarbons (PAHs); no load value was provided. Because the report for the previous 1996 monitoring report contains a load value for PAHs, and because the average daily concentration value for 1996 is the same as that for 1997 ( $<0.18 \mu\text{g/l}$ ), a load value of 0.04 kg/day was used in the calculations for PAHs. Note (a) in Table V.K.2 has been revised.

In Table V.K.7, on p. V.K.48, the pollutant concentrations in stormwater were calculated outside of a spreadsheet (manually) resulting in rounding error. A spreadsheet calculation has been added to the background calculations to maintain all decimal values up to the final result. The concentration values in Table V.K.7 have been revised to reflect the results of the new spreadsheet calculation, and are shown as rounded to two significant figures.

In Table V.K.8, on p. V.K.51, the calculation error explained above for p. V.K.35, Table V.K.2, carried through to the calculation made for Table V.K.8 when effluent loads and CSO loads were added together. Values for TSS loads have been corrected and revised accordingly.

(Text continues on p. XII.519.)

TABLE V.K.2 (revised)  
ESTIMATED ANNUAL MASS POLLUTANT LOADING TO BAY  
FROM BAYSIDE EFFLUENT DISCHARGES

|  | Bayside<br>Base Case<br>/a/ | Bayside Base Case<br>+ Proposed Sewer<br>System for Mission<br>Bay Project | Bayside Base Case +<br>100% Combined<br>Sewer System for<br>Mission Bay Project | Cumulative<br>Bayside |
|--|-----------------------------|--|---|-----------------------|
| <b>Effluent Volume (MG/yr) /b/</b>           | 30,203                      | 31,045   | 31,045  | 31,496                |
| <b>% Change in Volume from Base Case /c/</b> | —                           | 2.8%   | 2.8%  | 4.3%                  |
| <b>Monitored Pollutant Load (lb/yr)</b>      |                             |  |   |                       |
| Total Suspended Solids                       | 4,100,000                   | 4,200,000  | 4,200,000   | 4,300,000             |
| Ammonia, Nitrogen                            | 5,100,000                   | 5,200,000  | 5,200,000   | 5,300,000             |
| Oil and Grease                               | 1,300,000                   | 1,300,000  | 1,300,000   | 1,300,000             |
| Polynuclear Aromatic Hydrocarbons            | 36                          | 37   | 37  | 38                    |
| Arsenic                                      | 530                         | 550  | 550   | 550                   |
| Cadmium                                      | 54                          | 55   | 55  | 56                    |
| Chromium                                     | 250                         | 260  | 260   | 260                   |
| Copper                                       | 2,100                       | 2,200  | 2,200   | 2,200                 |
| Lead   | 880                         | 910  | 910   | 920                   |
| Mercury                                      | 17                          | 18   | 18  | 18                    |
| Nickel                                       | 1,000                       | 1,000  | 1,000   | 1,100                 |
| Silver                                       | 530                         | 550  | 550   | 550                   |
| Zinc   | 13,000                      | 13,000   | 13,000  | 14,000                |
| Selenium                                     | 180                         | 190  | 190   | 190                   |
| Cyanide                                      | 2,500                       | 2,600  | 2,600   | 2,600                 |

*Notes:*

MG = million gallons

lb = pounds

yr = year

- Derived from data in City and County of San Francisco, Public Utilities Commission, Bureau of Water Pollution Control - Southeast Plant, Southeast WPCP Monitoring Report December 1997, January 16, 1998. Polynuclear Aromatic Hydrocarbon data derived from City and County of San Francisco, Public Utilities Commission, Bureau of Water Pollution Control - Southeast Plant, Southeast WPCP Monitoring Report December 1996, January 17, 1997.
- Derived from data in City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998.
- The percent change in volume is the same as for load. While the percent change reflects the incremental change that would occur in each analysis scenario, there is a level of imprecision associated with the load calculations. Therefore, all load values have been rounded to two significant figures to reflect the statistical uncertainty of the calculations. The significance of each change was evaluated by determining whether the change falls within the range of uncertainty.

*Source:* EIP Associates.



**TABLE V.K.3 (revised)**  
**ESTIMATED ANNUAL MASS POLLUTANT LOADING TO BAY**  
**FROM BAYSIDE TREATED OVERFLOWS**

|  | Base Case<br>Bayside/a/ | Bayside Base Case<br>+ Proposed Sewer<br>System for Mission<br>Bay Project | Bayside Base Case<br>+ 100% Combined<br>Sewer System for<br>Mission Bay<br>Project | Cumulative<br>Bayside |
|--|-------------------------|--|--|-----------------------|
| <b>Overflow Volume (MG/yr) /b/</b>           | 910                     | 912  | 928  | 1,008                 |
| <b>% Change in Volume from Base Case /c/</b> | —                       | 0.22%  | 2.0%   | 11%                   |
| <b>Monitored Pollutant Load (lb/yr)</b>      |                         |  |  |                       |
| Total Suspended Solids                       | 680,000                 | 680,000  | 700,000  | 750,000               |
| Ammonia, Nitrogen                            | 9,600                   | 9,600  | 9,800  | 11,000                |
| Oil and Grease                               | 61,000                  | 61,000   | 63,000   | 68,000                |
| Polynuclear Aromatic Hydrocarbons            | <u>4.1</u>              | <u>4.1</u>   | <u>4.2</u>   | <u>4.6</u>            |
| Arsenic                                      | 60                      | 60   | 61   | 66                    |
| Cadmium                                      | 17                      | 17   | 17   | 19                    |
| Total Chromium                               | 91                      | 92   | 93   | 100                   |
| Copper                                       | 300                     | 300  | 300  | 330                   |
| Lead   | 470                     | 470  | 480  | 520                   |
| Mercury                                      | <u>2.9</u>              | <u>2.9</u>   | 2.9  | <u>3.2</u>            |
| Nickel                                       | 160                     | 160  | 160  | 180                   |
| Silver                                       | 37                      | 37   | 38   | 41                    |
| Zinc   | 2,400                   | 2,400  | 2,500  | 2,700                 |
| Selenium                                     | 6.5                     | 6.5  | 6.6  | 7.2                   |
| Cyanide                                      | 38                      | 38   | 39   | 42                    |

*Notes:*

MG = million gallons      lb = pound      yr = year

- Derived from the following data sources provided by Jim Salerno, Laboratory Supervisor, Southeast Water Pollution Control Plant, September 5, 1997:  
City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1994 - June 1995.  
City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1995 - June 1996.  
City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1996 - June 1997.
- City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998.
- The percent change in load is the same as the percent change in volume. While the percent change reflects the incremental change that would occur in each analysis scenario, there is a level of imprecision associated with the load calculations. Therefore, all load values have been rounded to two significant figures to reflect the statistical uncertainty of the calculations. The significance of each change was evaluated by determining whether the change falls within the range of uncertainty.

*Source:* EIP Associates.

**TABLE V.K.4 (revised)**  
**ESTIMATED ANNUAL POLLUTANT LOADING FROM DIRECT STORMWATER DISCHARGE TO THE BAY FROM PROJECT AREA**

|   | <u>Bayside<br/>Base Case /a/</u> | <u>Bayside Base Case + Proposed<br/>Sewer System<br/>for Mission Bay Project/b/</u> |
|---|----------------------------------|---|
| <b>Stormwater Volume to Bay from<br/>Bay Basin of Mission Bay (MG/yr) /c/</b> | 15.6                             | 15.9  |
| <b>Pollutant Load (lb/yr) /d/</b>   |                                  |   |
| Total Suspended Solids  | 8,300                            | 6,600   |
| Cadmium   | 0.18                             | 0.21  |
| Total Chromium  | 1.5                              | 2.2   |
| Copper  | 2.8                              | 4.3   |
| Lead  | 6.6                              | 10  |
| Nickel  | 3.1                              | 4.8   |
| Zinc  | 24                               | 27  |

*Notes:*

MG= million gallons      lb = pound      ac = acre  
in = inch                      yr = year

- The percent change in load is the same as the percentage change in volume. While the percent change reflects the incremental change that would occur in each analysis scenario, there is a level of imprecision associated with the load calculations. Therefore, all load values have been rounded to two significant figures to reflect the statistical uncertainty of the calculations. The significance of each change was evaluated by determining whether the change falls within the range of uncertainty.
- The Cumulative Bayside scenario did not model direct stormwater discharges other than from the Project Area. The Mission Bay project would be the same under cumulative conditions as proposed. Thus, pollutant loads under the Cumulative Bayside condition would be the same as under the proposed project condition.
- Based on drainage basin area and runoff coefficient data provided by KCA Engineers, Inc. and Hawk Engineers.
- Derived from unit load data found in Bay Area Stormwater Management Agencies Association, *San Francisco Bay Area Stormwater Runoff, Pollutant Monitoring Data Analysis, 1988 - 1995, Final Report*, prepared by Woodward-Clyde Consultants, October 15, 1996, Table 5-2.

*Source:* EIP Associates.



**TABLE V.K.6 (revised)**  
**COMPARISON OF POLLUTANT CONCENTRATIONS IN TREATED OVERFLOWS WITH**  
**CONCENTRATIONS SHOWN TO CAUSE ACUTE AND/OR CHRONIC TOXICITY IN**  
**BIOASSAYS WITH MARINE/ESTUARINE ORGANISMS**

| Metal    | Mean Concentration<br>( $\mu\text{g/l}$ ) /b/ | Acute Toxicity Concentration<br>Ranges ( $\mu\text{g/l}$ ) /a/ |       |
|----------|---|--|-------|
|          |   | High   | Low   |
| Arsenic  | 7.9   | 16,030   | 232   |
| Cadmium  | 2.2   | 135,000  | 15.5  |
| Chromium | 12  | 105,000  | 2,000 |
| Copper   | 39  | 600  | 5.8   |
| Lead     | 61  | 27,000   | 315   |
| Mercury  | 0.38  | 1,678  | 3.5   |
| Nickel   | 21  | 350,000  | 151.7 |
| Silver   | 4.9   | 2.3  | --    |
| Zinc     | 320   | 320,000  | 191.5 |
| Selenium | 0.85  | 760 /c/  | --    |
| Cyanide  | 5.0   | 10,000   | 4.9   |

*Notes:*

$\mu\text{g/l}$  = micrograms per liter

-- = No Data

- a. U.S. Environmental Protection Agency, Office of Water, Water Quality Criteria, 1986.
- b. Mean concentration derived from data sources provided by Jim Salerno, Laboratory Supervisor, Southeast Water Pollution Control Plant, September 5, 1997:
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1994 - June 1995.
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1995 - June 1996.
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1996 - June 1997.
- c. Toxicity data for selenium provided for freshwater bioassays only.

Source: Dr. Joseph M. O'Connor.

**TABLE V.K.7 (revised)**  
**COMPARISON OF POLLUTANT CONCENTRATIONS IN STORMWATER WITH**  
**CONCENTRATIONS SHOWN TO CAUSE ACUTE TOXICITY IN BIOASSAYS WITH**  
**MARINE/ESTUARINE ORGANISMS**

| Metal    | Concentration ( $\mu\text{g/l}$ )/b/ | Acute Toxicity Concentration<br>Ranges ( $\mu\text{g/l}$ ) /a/ |       |
|----------|--------------------------------------|--|-------|
|          |                                      | High   | Low   |
| Cadmium  | <u>1.7</u>                           | 135,000  | 15.5  |
| Chromium | <u>18</u>                            | 105,000  | 2,000 |
| Copper   | <u>35</u>                            | 600  | 5.8   |
| Lead     | <u>83</u>                            | 27,000   | 315   |
| Nickel   | <u>38</u>                            | 350,000  | 151   |
| Zinc     | <u>220</u>                           | 320,000  | 192   |

*Notes:*

- a. U.S. Environmental Protection Agency, Office of Water, Water Quality Criteria, 1986.
- b. Concentration estimates derived from Bay Area Stormwater Management Agencies Association, *San Francisco Bay Area Stormwater Runoff, Pollutant Monitoring Data Analysis, 1988-1995, Final Report*, prepared by Woodward-Clyde Consultants, October 15, 1996, Table 5-2.

Source: Dr. Joseph M. O'Connor.



TABLE V.K.8 (revised)  
SUMMARY OF ANNUAL POLLUTANT LOADS TO BAY FROM BAYSIDE EFFLUENT AND OVERFLOWS

| Monitored Pollutant               | Bayside Base Case |        | Bayside Base Case + Proposed Sewer System for Mission Bay Project |        | Change from Base Case |     | Bayside Base Case + 100% Combined Sewer System for the Mission Bay Project |        | Change from Base Case |     | Cumulative Bayside |        | Change from Base Case |       |
|-----------------------------------|-------------------|--------|---|--------|-----------------------|-----|--|--------|-----------------------|-----|--------------------|--------|-----------------------|-------|
|                                   | Load (lb/yr)      | 31,113 | Load (lb/yr)  | 31,957 | Load (lb/yr)          | 844 | Load (lb/yr)   | 31,973 | Load (lb/yr)          | 860 | Load (lb/yr)       | 32,504 | Load (lb/yr)          | 1,391 |
| Total Bayside Volume (MG/yr) /a/  |                   |        |   |        |                       |     |  |        |                       |     |                    |        |                       |       |
| Total Suspended Solids            | 4,800,000         |        | 4,900,000   |        | 2.4%                  |     | 4,900,000  |        | 2.7%                  |     | 5,000,000          |        | 5.2%                  |       |
| Ammonia, as Nitrogen              | 5,100,000         |        | 5,300,000   |        | 2.8%                  |     | 5,300,000  |        | 2.8%                  |     | 5,300,000          |        | 4.3%                  |       |
| Oil and Grease                    | 1,300,000         |        | 1,400,000   |        | 2.7%                  |     | 1,400,000  |        | 2.8%                  |     | 1,400,000          |        | 4.6%                  |       |
| Polynuclear Aromatic Hydrocarbons | 40                |        | 41  |        | 2.5%                  |     | 41   |        | 2.7%                  |     | 42                 |        | 4.9%                  |       |
| Arsenic                           | 590               |        | 600   |        | 2.5%                  |     | 610  |        | 2.7%                  |     | 620                |        | 4.9%                  |       |
| Cadmium                           | 71                |        | 72  |        | 2.2%                  |     | 73   |        | 2.6%                  |     | 75                 |        | 5.8%                  |       |
| Total Chromium                    | 340               |        | 350   |        | 2.1%                  |     | 350  |        | 2.6%                  |     | 370                |        | 6.0%                  |       |
| Copper                            | 2,400             |        | 2,500   |        | 2.5%                  |     | 2,500  |        | 2.7%                  |     | 2,500              |        | 5.1%                  |       |
| Lead                              | 1,300             |        | 1,400   |        | 1.9%                  |     | 1,400  |        | 2.5%                  |     | 1,400              |        | 6.5%                  |       |
| Mercury                           | 20                |        | 20  |        | 2.4%                  |     | 20   |        | 2.7%                  |     | 21                 |        | 5.2%                  |       |
| Nickel                            | 1,200             |        | 1,200   |        | 2.4%                  |     | 1,200  |        | 2.7%                  |     | 1,200              |        | 5.2%                  |       |
| Silver                            | 570               |        | 580   |        | 2.6%                  |     | 580  |        | 2.7%                  |     | 590                |        | 4.7%                  |       |
| Zinc                              | 15,000            |        | 16,000  |        | 2.4%                  |     | 16,000   |        | 2.7%                  |     | 16,000             |        | 5.3%                  |       |
| Selenium                          | 190               |        | 190   |        | 2.7%                  |     | 190  |        | 2.8%                  |     | 190                |        | 4.5%                  |       |
| Cyanide                           | 2,500             |        | 2,600   |        | 2.8%                  |     | 2,600  |        | 2.8%                  |     | 2,700              |        | 4.4%                  |       |

Notes:

See Table V.K.2 and Table V.K.3 for effluent and treated overflow loads, respectively.

MG = million gallons lb = pounds yr = year

- City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998.
- The percentage change in load is assumed to be the same as the percentage change in volume. While the percentage change reflects the incremental change that would occur in each analysis scenario, there is a level of imprecision associated with the load calculations. Therefore, all load values have been rounded to two significant figures to reflect the statistical uncertainty of the calculations. The significance of each change was evaluated by determining whether the change falls within the range of uncertainty.

Source: EIP Associates.

### Text Changes

To correct a grammatical error, the fourth sentence in the third full paragraph on p. V.K.27 has been changed as follows.

**Only the early part of storm runoff from larger storms would be pumped to the Channel box sewer, either because the Channel box sewer storage capacity would be reached before the end of the storm or because the rainfall intensity would be such that resulting storm runoff ~~would~~ rates would exceed the pumping rate to the Channel box.**

To correct an extraneous cross-reference, the last sentence on pp. V.K.33-V.K.34 has been changed as follows:

**This assumption is reasonable; however, actual pollutant loads could differ to the extent that the eventual mix of land uses in the project and other cumulative future projects differs from the existing San Francisco land use mix. ~~(see “Volume and Quality of Municipal Wastewater Effluent,” in the Impacts subsection below).~~**

Note “e” in Table V.K.5 on p. V.K.43 is changed as follows to correct a missing word:

- e. Corresponds to the U.S. EPA Acute Ambient Water Quality Criteria for the protection of saltwater life (40 CFR, Section 131.36).**

### **Section V.M, Community Services and Utilities**

The projected student population in the SEIR is based on ABAG *Projections '96* forecasts of numbers of children likely to live in San Francisco in 2015. The SEIR projections may be an overestimate if the numbers of children living in Mission Bay households were to be lower than the citywide average; if this were the case, the SEIR analysis results for school impacts would be conservative. The number is a citywide number of children of school age, and does not differentiate between public school and private school children. Since the Draft SEIR was published, the San Francisco Unified School District staff has estimated that overall, about 75% of school-age children in San Francisco attend public schools. Based on this information, the SEIR has been revised to indicate a new, more specific demand for public school facilities. Text changes have been made in the Impacts discussion of Community Services and Utilities: Schools, on pp. V.M.30-V.M.32. Corresponding revisions to the Summary and to Measure M.1 in Chapter VI, Mitigation Measures, are also provided below. None of these revisions affect the analysis or conclusions of the SEIR.

On p. V.M.30, the last sentence has been revised as follows:

**The actual number of school-age children who would need to be accommodated by the SFUSD ~~is likely to be~~ would be lower than the total number of projected school-age children,**



**as ~~some children~~ about 25% would attend private schools, resulting in about 555 attending public elementary school, about 300 attending public middle school, and about 375 attending public high school from the Project Area.**

The last four sentences in the second paragraph on p. V.M.31 have been revised to read:

**If 500 of the approximately ~~730~~ 555 new public school students were accommodated at a new elementary school within the Project Area, approximately ~~230~~ 55 elementary school students would need to attend other schools throughout the District. These ~~230~~ 55 students would fill about ~~20%~~ 5% of the 1,100 planned new elementary school seats if they could be available to Mission Bay children, or about ~~60%~~ 15% of an average size elementary school in San Francisco./88/ It is reasonable to assume that the additional 55 elementary school students could be accommodated either in a new school in the Project Area or in other School District facilities. Middle and high school students would probably not be easily accommodated at nearby schools or elsewhere in the District. The ~~390~~ 300 public middle school students would fill about ~~55%~~ 40% of an average size middle school, and the ~~490~~ 375 public high school students would use about ~~45%~~ 35% of an average size high school.**

The second sentence in the first full paragraph on p. V.M.32 has been revised as follows:

**Approximately ~~1,120~~ 730 additional public school students (~~230~~ 55 elementary, ~~390~~ 300 middle, and ~~490~~ 375 high school students) would need to be accommodated in the public school system.**

The following sentence is added to the Summary on p. II.33 as a new third sentence in the paragraph under "Schools:"

**About 75% of these students would be expected to attend public schools.**

Measure M.1 in Chapter VI, Mitigation Measures, on p. VI.52, has been revised to account for the new information about the proportion of public school students, as follows:

**M.1 Transfer the 2.2-acre school site to the San Francisco Unified School District in a developable condition prior to issuance of building permits for residential units that will make the total combined number of dwelling units in Mission Bay North and Mission Bay South equal to or greater than ~~2,250~~ 3,200 dwelling units. Applies to Mission Bay North and Mission Bay South.**

The second, third, and last sentences in the second paragraph of the text discussing this Measure, on p. VI.52, have also been revised:

**Therefore, the SFUSD would need a new school when about 300 public elementary school age children would be living in the Project Area./13/ About 300 public elementary school age children would live in about ~~2,500~~ 3,350 dwelling units. . . Therefore, to compensate for the 6-month lag time in school construction, the school site would be transferred when permits**

are issued for residential units that are equal to or exceed ~~2,250~~ 3,200 total dwelling units for Mission Bay North and Mission Bay South.

The San Francisco Unified School District has determined that the cost per square foot for a new public elementary school is larger than the \$225 used in the Draft SEIR. The District estimates that the cost is approximately \$315 per square foot./1/ If this cost figure is applied to the approximately 40,000-square-foot school discussed in the SEIR (p. V.M.31), the total cost would be about the same as reported on p. V.M.32 of about \$12.6 million. If this cost figure is applied to a school the size of the newest completed elementary school (the Tenderloin Elementary School, at 56,000 sq. ft.) as in endnote 92, the total cost would be about \$17.6 million. The next-to-last sentence in the first partial paragraph on p. V.M.32 has been revised to provide this range of potential facilities costs:

**Construction of a 500-student elementary school would costs about \$12.6 to \$17.6 million in 1998 dollars./92/**

The text of Endnote 92 on p. V.M.61, has been replaced as follows:

**/92/ Lucian R. Blazej, Executive Director, Facilities Development and Management, San Francisco Unified School District, telephone conversation with EIP Associates, August 12, 1998. Construction of an elementary school would cost about \$315 per sq. ft., not including the cost of land or furniture and equipment, resulting in a cost of about \$12.6 million for a 40,000-sq.-ft. facility, and a cost of about \$17.6 million for a 56,000-sq.-ft. facility.**

Endnote 57 on p. V.M.59 has been replaced with the following:

**Douglas F. Wong, Executive Director, Port of San Francisco, memorandum accompanying *San Francisco Port Commission, Resolution No. 97-92 (July 22, 1997)*, October 9, 1997, p. 2.**

The date in Endnote 68 on p.V.M.60 has been changed from December 5, 1997 to December 17, 1997.

Endnote 82 on p. V.M.61 has been revised as follows:

**San Francisco Unified School District, Negative Declaration, Tenderloin Elementary School, October 25, 1995, p. 1.**



## CHAPTER VI, MITIGATION MEASURES

### Section VI.E, Transportation

Clarifications have been made to several intersection measures in Section VI.E, Transportation Mitigation Measures.

Measure E.37a, on p. VI.20, has been clarified to read:

**E.37a Widen the northbound approach on the east side to provide an additional through lane.**

Measure E.39, on p. VI.20, has been clarified to read:

**E.39 King Street. Applies to Mission Bay North.**

**Widen the south side of King Street between Fourth Street and Third Street to provide the additional eastbound through lane noted in Mitigation Measure E.36 37, including providing additional right-of-way.**

### Section VI.F, Air Quality

To clarify the intended implementation of Mitigation Measure F.6 and to make clear the policy goal meant to be accomplished by Mitigation Measure F.6, the following text changes are made on p. VI.35.

#### Creation of Buffer Zones

**F.6 ~~Locate pre-school and child care centers to minimize potential impacts from toxic air contaminant emissions sources.~~ Require pre-school and child care centers to notify BAAQMD and the San Francisco Department of Public Health regarding the locations of their operations, and require these centers to consult with these agencies regarding existing and possible future stationary and mobile sources of toxic air contaminants. The purpose of these consultations is to obtain information so that ~~Locate pre-school and child care centers can be located to minimize potential impacts from toxic air contaminant emissions sources.~~ Applies to Mission Bay North and Mission Bay South.**

**Consultation of pre-school and child-care centers with the San Francisco Department of Public Health and the BAAQMD is intended to assist the managers of the pre-school and child-care centers and to assist City staff and officials in charge of building and other permits to make decisions that minimize potential impacts from toxic air contaminant emissions on these sensitive receptors.**

Although Mitigation Measures F.1 and F.7 are mitigation for different impacts, namely increases in criteria pollutants versus increases in toxic air contaminants, the mitigation measures are identical. Therefore, Mitigation Measure F.7 is eliminated, and the following text changes are made on p. VI.35.

### Mobile Sources

**Implementation of Mitigation Measure F.1, which calls for implementation of Mitigation Measures E.46 through E.50 in Section VI.E, Mitigation Measures: Transportation, would decrease vehicle trips, thereby reducing emissions of toxic air contaminants from vehicles.**

**~~F.7—Implement measures to decrease vehicle trips, as described in Mitigation Measures E.46 through E.50 in Section VI.E, Mitigation Measures: Transportation. Applies to Mission Bay North and South.~~**

### **Section VI.K, Hydrology and Water Quality**

To clarify the applicability of Mitigation Measure K.6, the following text changes are made:

#### **Flooding**

**K.6 Structures in the Project Area should be designed and located in such a way to assure the reasonable safety of structures and shoreline protective devices built in the Bay or in low-lying shoreline areas from the dangers of tidal flooding, including consideration of a rise in relative sea level. Detailed construction specifications to mitigate against impacts of a sea-level rise, however, would require specific flood protection engineering and building analysis by a licensed engineer, where structures are proposed below an elevation of -1 [negative one] foot, San Francisco City Datum (99 foot elevation, Mission Bay Datum). Measures include:**

**K.6a Set back from the water's edge;**

**K.6b Install seawalls, dikes, and/or berms during construction of infrastructure;**

**K.6c Provide for dewatering basements;**

**K.6d Construct streets and sidewalks above existing grades by reducing the amount of excavation for utilities or basements;**

**K.6e Use topsoil to raise the level of public open spaces;**

**K.6f Use half-basements and partially depressed garage levels to minimize excavation.**

**Measure is identified as L.15 in Appendix A, Initial Study. Applies to both Mission Bay North and Mission Bay South.**

**Buildings above -1 [negative one] foot, San Francisco City Datum (99-foot elevation, Mission Bay Datum) would be above the level of flooding hazard, including a margin for sea-level rise and a margin of safety.**



## Section VI.M, Community Services and Utilities

A change to Measure M.1 is presented earlier in this section on p. XII.520.

## CHAPTER VII, VARIANTS TO THE PROPOSED PROJECT

### Variant 1: Terry A. François Boulevard Variant

On p. VII.2, the last sentence at the end of the first full paragraph has been deleted.

### Variant 2: Esprit Commercial Industrial/Retail Variant

The housing discussion for the Esprit Variant has been revised to reflect updated text in the Mission Bay South Redevelopment Plan. On p. VII.13 in Chapter VII, Variants to the Proposed Project, the following text has been inserted at the end of the third full paragraph:

**As with the project, the variant's housing demand would not be a significant effect under CEQA. However, the Mission Bay South Redevelopment Plan, Section 304.10, "Fees and Exactions: Parcels X2, X3 and X4," stipulates that standard City fees and exactions would apply to private property other than properties owned by Catellus, except as provided in an owner participation agreement when the public benefits proposed under the Owner Participation Agreement exceed those of the City's standard fees or exactions. The City's OAHPP, or a housing exaction of equivalent or greater benefit, would apply to office development on non-Catellus property, including Esprit's property. Therefore, to the extent that office space is developed, some additional housing supply would be forthcoming to address the housing shortfall./3a/**

The following new Endnote 3a has been added to Chapter VII:

**/3a/ As with the project, an imbalance of housing to jobs is not a physical environmental effect, but rather an economic and social issue that warrants attention by San Francisco policymakers and other jurisdictions in the Bay Area. Certain indirect project and cumulative effects caused by the imbalances in local employment and housing opportunities would be environmental impacts, primarily transportation and related air quality impacts, and are described in those sections of this SEIR. The geographic distribution of employment and housing is taken into account in the SEIR analysis. For example, commute patterns are considered in the trip distribution factors underlying the transportation and air quality impact analyses. The secondary physical impacts of the Project Area housing supply shortfall (i.e., significant traffic, transit, and air quality effects from both the project and project-plus-cumulative impacts), can be best mitigated through measures directly addressing those effects, such as those that encourage increases in transit use and reduce traffic congestion.**

Table VII.B.2 on p. VII.17 has been revised to correct the project numbers for average delay at intersections, as shown in Table V.E.10, pp. V.E.69-V.E.71. The revisions do not necessitate changes to the SEIR text, nor do they affect the analysis or conclusions of the SEIR.

Table VII.B.3 on p. VII.18 has been revised to include updated PM<sub>10</sub> numbers. The previous estimates of PM<sub>10</sub> emission for Variant 2 inadvertently included only exhaust emissions. The numbers have been revised to include entrained road dust and PM<sub>10</sub> emissions from tire wear. The revisions do not necessitate changes to the SEIR text, nor do they affect the analysis or conclusions of the SEIR. The revised table (revisions are underlined) is shown on p. XII.526.

### Variant 3: No Berry Street At-Grade Rail Crossing Variant

Table VII.C.3 on p. VII.27 has been revised to reflect updated PM<sub>10</sub> numbers for the same reasons that Table VII.B.3 was updated. The revised table (revisions are underlined) is shown on p. XII.526.

**TABLE VII.B.2 (revised)**  
**YEAR 2015 INTERSECTION LEVEL OF SERVICE COMPARISON**  
**VARIANT 2 COMPARED WITH PROJECT**

| Intersection                | Project         |          | Variant 2       |     |
|-----------------------------|-----------------|----------|-----------------|-----|
|                             | Delay (sec/veh) | LOS      | Delay (sec/veh) | LOS |
| 16th and Seventh Streets    | 32.2            | D        | 16.1            | C   |
| 16th and Third Streets      | <u>25.2</u>     | D        | 19.8            | C   |
| Third and Mariposa Streets  | <u>23.7</u>     | <u>C</u> | 17.9            | C   |
| Mariposa and I-280 Off-ramp | 35.9            | D        | 27.8            | D   |

Source: Wilbur Smith Associates.



**TABLE VII.B.3 (revised)**  
**ESTIMATED VEHICULAR EMISSIONS**  
**FROM VARIANT 2 TRAFFIC IN 2015**

| <b>Pollutant</b>                       | <b>BAAQMD Threshold<br/>(lb/day)</b> | <b>Project<br/>(lb/day)</b> | <b>Variant 2<br/>(lb/day)</b> |
|--|--------------------------------------|-----------------------------|-------------------------------|
| Reactive Organic Gases (ROG)           | 80/a/                                | 865                         | 856                           |
| Nitrogen Oxides (NO <sub>x</sub> )     | 80/a/                                | 1,324                       | 1,310                         |
| Particulate Matter (PM <sub>10</sub> ) | 80/a/                                | <u>1,968</u>                | <u>1,944</u>                  |
| Carbon Monoxide (CO)                   | 550/b/                               | 12,228                      | 12,215                        |

*Notes:*

- a. The BAAQMD regards this amount of emissions as a threshold of significance for a regional impact.
- b. For carbon monoxide, the BAAQMD does not regard 550 lb/day as a threshold of significance, but rather, an indicator to perform microanalysis.

*Source:* EIP Associates. Based on modeling using the California Air Resources Board's URBEMIS version 5 model.

**TABLE VII.C.3 (revised)**  
**ESTIMATED VEHICULAR EMISSIONS**  
**FROM VARIANT 3 TRAFFIC IN 2015**

| <b>Pollutant</b>                       | <b>BAAQMD Threshold<br/>(lb/day)</b> | <b>Project<br/>(lb/day)</b> | <b>Variant 3<br/>(lb/day)</b> |
|--|--------------------------------------|-----------------------------|-------------------------------|
| Reactive Organic Gases (ROG)/a/        | 80/a/                                | 865                         | 847                           |
| Nitrogen Oxides (NO <sub>x</sub> )     | 80/a/                                | 1,324                       | 1,297                         |
| Particulate Matter (PM <sub>10</sub> ) | 80/a/                                | <u>1,968</u>                | <u>1,928</u>                  |
| Carbon Monoxide (CO)                   | 550/b/                               | 12,228                      | 12,003                        |

*Notes:*

- a. The BAAQMD regards this amount of emissions as a threshold of significance for a regional impact.
- b. For carbon monoxide, the BAAQMD does not regard 550 lb/day as a threshold of significance, but rather, an indicator to perform microanalysis.

*Source:* EIP Associates. Based on modeling using the California Air Resources Board's URBEMIS version 5 model.

## **Combination of Variants Currently Under Consideration**

A combination of variants to the proposed project is presently under consideration by project sponsors. This combination evolved from responses to public comments and from refinements to the project made by the project sponsors since publication of the Draft SEIR. The following discussion of the combination of variants currently under consideration is added as a new Section G to the end of Chapter VII, Variants to the Proposed Project. The information below is intended to describe the combination of variants for the reader's convenience and confirms that the combination of variants would not result in any new significant impacts not analyzed elsewhere in the Draft SEIR.

### **G. COMBINATION OF VARIANTS CURRENTLY UNDER CONSIDERATION BY THE PROJECT SPONSORS**

#### **INTRODUCTION**

The project sponsors are considering a combination of variants to the proposed project. This combination evolved from responses to public comments and from refinements to the project made by the project sponsors since publication of the Draft SEIR. The project with the variants under consideration by the project sponsors would be similar to the proposed project without those variants. The purpose of this section is twofold: 1) to present in one place for ease of reference both the land use program currently under consideration by the project sponsors and the assessment of its environmental effects; and 2) to determine if there would be any new impacts and if additional mitigation measures would be required.

#### **DESCRIPTION**

The combination of variants currently under consideration by the project sponsors includes a variant from the SEIR, two modified SEIR variants, and a new variant, as follows:

- **Variant 1: Terry A. François Boulevard Variant/Expanded Bayshore Open Space Proposal (see Chapter VII, p. VII.2, and Variants, pp. XII.461-XII.466 regarding this variant).**
- **Variant 2: Esprit Commercial Industrial/Retail Variant (see Chapter VII, p. VII.12).**
- **Variant 3A: Modified No Berry Street Crossing Variant (see Variants, "Request for a Modified No Berry Street At-Grade Rail Crossing Variant," pp. XII.467-XII.481).**
- **Variant 5: Castle Metals Block Commercial Industrial/Retail Variant (see Variants, "Request for a Castle Metals Commercial Industrial/Retail Variant," pp. XII.481-XII.496)**



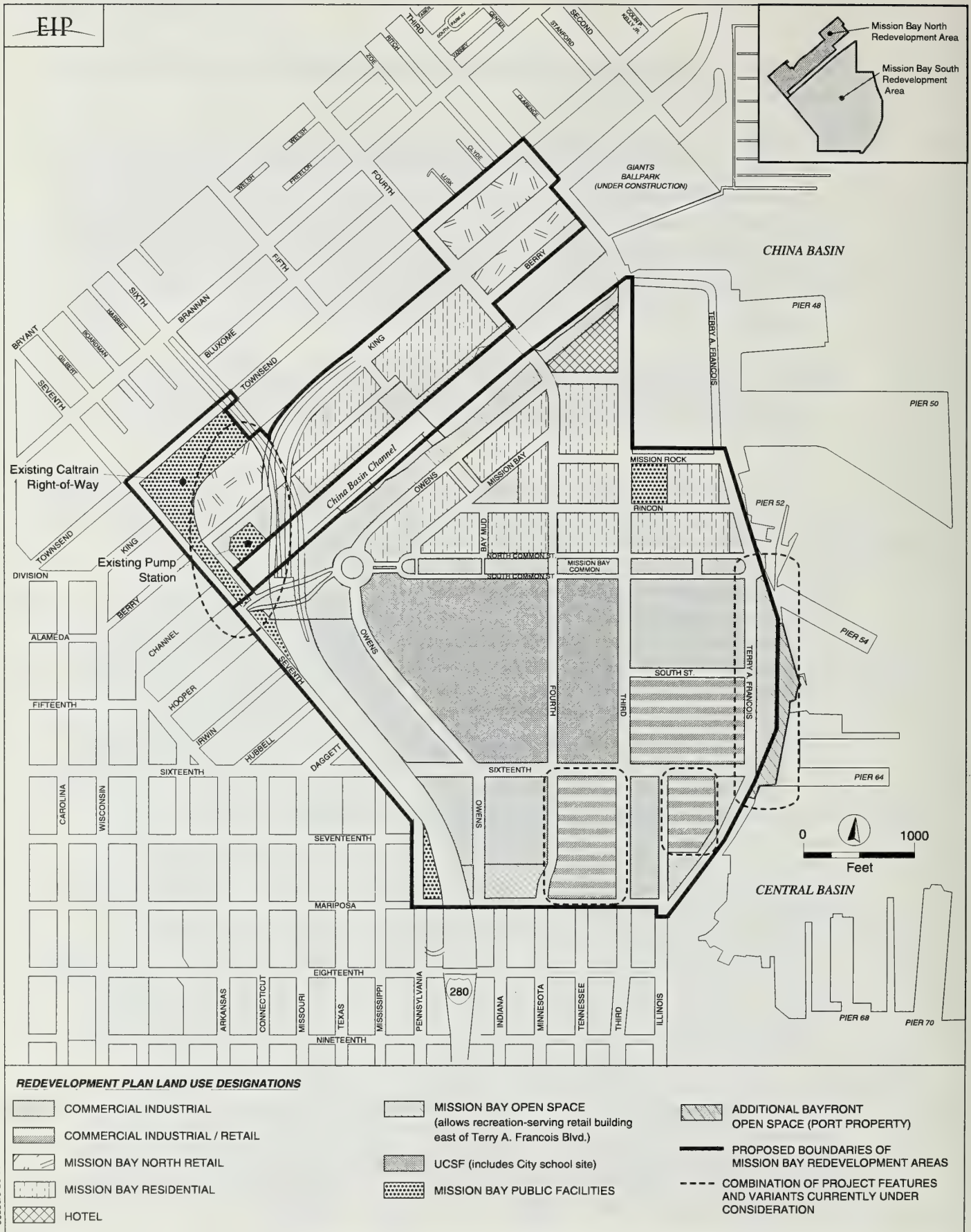
In summary, this combination of variants would be the same as the proposed project except for the following elements:

- The Terry A. Francois Boulevard would be realigned to the west to allow development of open space to the east closer to the San Francisco Bay. This Project Area open space would be integrated with open space to be developed by Catellus on 2 acres of adjacent port property outside the proposed Mission Bay South Redevelopment Area to create an expanded bayfront open space. A small commercial building would be permitted within the Project Area's open space to the east of Terry A. Francois Boulevard. Its anticipated use is recreation-oriented retail services that could include some restaurant uses (Variant 1 noted above).
- There would be no roadway crossing of the railroad tracks at Berry Street. Berry Street would be extended south to Common Street, and the retail space in the northwestern-most block of the Project Area would be reduced by 50% (Variant 3A noted above).
- The Mission Bay South Retail land use designation would be eliminated. The land use designation proposed for the Esprit site and the Castle Metals block would be changed to Commercial Industrial/Retail (Variants 2 and 5 noted above).

Figure VII.G.1 presents a land use designation map for the proposed project incorporating this combination of variants as summarized in the following discussion. (This map is also shown on the inside front cover.) Under this combination of variants, the alignment of Terry A. Francois Boulevard would be moved west, away from the Bay, and the proposed Project Area open space would be shifted east. Further, the Project Area open space would be integrated with the development of 2 acres of open space outside of the Project Area on the adjacent Port property to create an expanded bayshore open space. A small commercial building (15,000 gross sq. ft.) would be allowed within the Project Area's open space to the east of Terry A. Francois Boulevard. Its anticipated use is recreation-oriented retail services that could involve restaurant use.

This combination of variants would eliminate the at-grade railroad crossing at Berry Street proposed in the project. To address the reduced access to the northwestern part of the Project Area, this combination of variants would add a new two-lane section of roadway extending Berry Street around the western end of China Basin Channel to connect with Common Street. The connection of Berry Street with Common Street would link east/west access to the northwestern section of the Project Area. However, the Berry Street extension would not fully compensate for the elimination of the Berry Street crossing of the railroad tracks. As a result, this combination of variants, compared to the project, would still reduce access to Mission Bay North from the west.

Due to the reduced access to the northwestern-most block fronting on Berry Street between Sixth and Seventh Streets, west of I-280 King Street ramps and east of the Caltrain tracks, the city-serving retail development anticipated for that block would be reduced 50%: from 222,000 gross sq. ft. under the proposed project to 111,000 gross sq. ft. under this combination of variants.



SOURCE: San Francisco Redevelopment Agency

### MISSION BAY SUBSEQUENT EIR

**FIGURE VII.G.1 (NEW) COMBINATION OF PROJECT FEATURES AND VARIANTS CURRENTLY UNDER CONSIDERATION BY THE PROJECT SPONSORS**



This combination of variants would eliminate the Mission Bay South Retail land use designation on the Esprit site and the Castle Metals block, and would change those areas so designated to Commercial Industrial/Retail.

Finally, this combination of variants would create a new Height Zone for a portion of the block also containing 1900 Third Street fronting on Mariposa and Third Streets. The new Height Zone would allow development of up to 90 feet in height on 90% of the developable area and a tower of up to 160 feet in height on 10% of the developable area. The rest of the block would remain in Height Zone 6. The creation of the new Height Zone would add one more allowable new tower to Mission Bay South compared to the 16 towers allowed under the proposed project.

Table VII.G.1 summarizes land use with the combination of variants and the resulting project totals. Table VII.G.2 summarizes the Redevelopment Plan land use designations with the project and the combination of variants. As shown in these tables, adoption of the project with this combination of variants would result in about 6,621,000 square feet of commercial industrial/office space, about 1,064,000 square feet more than the project; 239,000 square feet of city-serving retail space, about 566,000 square feet less than the project/8/, and 47 acres of public open space, with the associated development of approximately 2 more acres on adjacent port property to create an expanded bayfront open space area. Other land use totals would not be different from the project.

If the Combination of Variants (including Variant 2, regarding the Esprit parcel and Variant 5, for the Castle Metals block) were adopted, land use designations for Esprit and the Castle Metals block would be changed in the Redevelopment Plan for Mission Bay South and the land use program in Mission Bay North would be changed. Similarly, the objectives in the Redevelopment Plans for Mission Bay South and Mission Bay North would be expected to change to reflect the maximum development assuming the Combination of Variants Currently under Consideration by the Project Sponsors. Therefore, objective H listed on p. III.7 in "Project Sponsors and Their Objectives" would be revised to read:

- H. Strengthening the economic base of the Project Area and the community by strengthening retail and other commercial functions in the Project Area through the addition of approximately ~~1.5 million~~ 941,000 gross sq. ft. of retail space, a major hotel, and about ~~5,557,000~~ 6,621,000 gross sq. ft. of mixed office, research and development, and light manufacturing uses.

## ENVIRONMENTAL ISSUES

The environmental effects of this combination of variants under consideration by the project sponsors would be similar to those of the proposed project (see the impacts subsection for each environmental topic in Chapter V, and the respective subsection for each topic in Chapter VI, Mitigation Measures). This combination of variants' minor differences from the project's effects are described in Chapter VII, Variants, and in this Comments and Response document in Variants, "Combination of Variants Currently Under Consideration."

**TABLE VII.G.1 (new)**  
**SUMMARY OF PROPOSED DEVELOPMENT BY LAND USE /a/**  
**PROJECT WITH COMBINATION OF VARIANTS**  
**CURRENTLY UNDER CONSIDERATION BY THE PROJECT SPONSORS**

| <b>Land Use</b>                                  | <b>Mission Bay North<br/>Redevelopment Area</b> | <b>Mission Bay South<br/>Redevelopment Area</b> | <b>Grand Total /b/</b> |
|--|---|---|------------------------|
| Residential (dwelling units)                     | 3,000   | 3,090   | 6,090/c/               |
| Commercial Industrial and Office (gross sq. ft.) | 0   | 6,621,000                                       | 6,621,000              |
| UCSF (gross sq. ft.)                             | 0   | 2,650,000                                       | 2,650,000              |
| <b>Retail</b>                                    |   |   |                        |
| Entertainment-Oriented Retail (gross sq. ft.)    | 389,000   | 56,000  | 445,000                |
| City-Serving Retail (gross sq. ft.)              | 111,000   | 128,000   | 239,000                |
| Neighborhood-Serving Retail (gross sq. ft.)      | 56,000  | 201,000   | 257,000                |
| Hotel (rooms)                                    | 0   | 500   | 500                    |
| Public Open Space (acres)/d/                     | 6   | 41/e/   | 47                     |
| Public Facilities (acres)                        | 1.5 /f/   | 3.7/g/  | 5.2                    |

**Notes:**

- Parking is not included in the gross square footage totals given for each land use. Maximum parking allowances are outlined in this section under "Parking and Loading" under "Redevelopment Plans and Proposed Land Uses," and are discussed in Table V.E.17 and "Parking Impacts" in Section V.E, Transportation: Impacts, pp. V.E.95-V.E.101.
- The conceptual agreements between the City and Catellus do not cover those portions of the proposed Redevelopment Areas not owned by Catellus. The components of the proposed development program summarized in the Grand Total that are not on land owned by Catellus consist of 90 dwelling units along Third Street, 604,000 gross sq. ft. of commercial/industrial and 50,000 gross sq. ft. of City-serving retail on the Castle Metals site, and 460,000 gross sq. ft. of commercial/industrial/retail and 40,000 city-serving retail on the Esprit site.  
The changes from the proposed project include the reduction of 111,000 gross sq. ft. of city-serving retail in Mission Bay North and 455,000 gross sq. ft. in Mission Bay South, for a total reduction of 566,000 gross sq. ft.; the addition of 1,064,000 gross sq. ft. of Commercial Industrial and Office space in Mission Bay South; and the addition of the 15,000-gross-sq.-ft. commercial building in the open space near Pier 64.
- Of the 3,000 dwelling units north of the Channel, 20% would be affordable units. Of the 3,090 dwelling units south of the Channel, the Redevelopment Agency would seek non-profit developers to build approximately 1,100 affordable units, i.e., 37%.
- Additionally, approximately 2 more acres of public open space would be developed by Catellus on adjacent port property outside of the Project Area as an expanded bayfront open space area.
- The 41 acres of public open space in Mission Bay South includes about 8 acres of open space on the proposed UCSF site.
- The existing Channel Pump Station in Mission Bay North is on about 1.5 acres; the site is not proposed for redevelopment.
- In addition to the acreages shown in the tables, land under the I-280 elevated freeway that is not otherwise designated Public Open Space would be designated Public Facilities.

*Source:* Catellus Development Corporation and San Francisco Redevelopment Agency.



**TABLE VII.G.2 (new)**  
**PROJECT WITH COMBINATION OF VARIANTS**  
**LAND USE DESIGNATIONS/a/**

| Land Use Designation                                      | Mission Bay North<br>Redevelopment Area | Mission Bay South<br>Redevelopment Area | Grand Total/b/ |
|---|---|---|----------------|
| Mission Bay Residential                                   |   |   |                |
| Dwelling Units/c/   | 1,920                                   | 3,090 /b/                               | 5,010          |
| Neighborhood-serving Retail (gross sq. ft.)               | 56,000                                  | 111,000                                 | 167,000        |
| Mission Bay North Retail                                  |   |   |                |
| Entertainment-oriented Commercial (gross sq. ft.)         | 389,000                                 | 0                                       | 389,000        |
| City-serving Retail (gross sq. ft.)/d/                    | 111,000                                 | 0                                       | 111,000        |
| Dwelling Units /c/  | 1,080                                   | 0                                       | 1,080          |
| Hotel   |   |   |                |
| Hotel (rooms)   | 0                                       | 500                                     | 500            |
| Entertainment-oriented Commercial (gross sq. ft.)         | 0                                       | 56,000                                  | 56,000         |
| UCSF Site/e/  |   |   |                |
| UCSF uses (gross sq. ft.)                                 | 0                                       | 2,650,000                               | 2,650,000      |
| City School Site (acres)                                  | 0                                       | 2.2                                     | 2.2            |
| Open Space (acres)  | 0                                       | 8                                       | 8              |
| Commercial Industrial                                     |   |   |                |
| Commercial Industrial (gross sq. ft.)                     | 0                                       | 4,163,000                               | 4,163,000      |
| Neighborhood-serving Retail (gross sq. ft.)               | 0                                       | 58,400                                  | 58,400         |
| Commercial Industrial / Retail                            |   |   |                |
| Commercial Industrial (gross sq. ft.)/d/                  | 0                                       | 2,458,000                               | 2,458,000      |
| Neighborhood-serving Retail (gross sq. ft.)               | 0                                       | 31,600                                  | 31,600         |
| City-serving Retail (gross sq. ft.)/d/                    | 0                                       | 128,000                                 | 128,000        |
| Mission Bay South Retail /d/                              |   |   |                |
| City-serving Retail (gross sq. ft.)                       | 0                                       | 0                                       | 0              |
| Public Facilities (acres, excluding City school site) /g/ | 1.5 /f/                                 | 1.5                                     | 3.0            |
| Public Open Space (acres, excluding UCSF)/h/              | 6                                       | 33                                      | 39             |

**Notes:**

- a. The locations of the proposed land use designations are shown in Figure VII.G.1. Parking is not included in the gross square footage totals given for each land use. Maximum parking allowances are outlined in this section in "Parking and Loading," under "Redevelopment Plans and Proposed Land Uses," and are discussed in Table V.E.17 and "Parking Impacts" in Section V.E, Transportation: Impacts.
- b. The conceptual agreements between the City and Catellus do not cover portions of the proposed Redevelopment Areas not owned by Catellus. The components of the proposed development program summarized in the Grand Total that are not on land owned by Catellus consist of 90 dwelling units along Third Street, 560,000 gross sq. ft. of Commercial Industrial and 50,000 gross sq. ft. of city-serving retail on the Castle Metals site, 44,000 gross sq. ft. of Commercial Industrial on the three small parcels at the northeastern corner of the Castle Metals site, and 460,000 gross sq. ft. of Commercial Industrial and 40,000 gross sq. ft. of city-serving retail on the Esprit site.
- c. Of the 3,000 dwelling units north of the Channel, 20% would be affordable units. Of the 3,090 dwelling units south of the Channel, the Redevelopment Agency would select developers to build approximately 1,100 affordable units.
- d. The changes from the project in gross floor area would be as follows: a reduction of 111,000 gross sq. ft. in Mission Bay North City Serving Retail; the addition of 1,169,000 gross sq. ft. of Commercial Industrial/Retail, of which 1,064,000 gross sq. ft. would be commercial Industrial and 105,000 gross sq. ft. would be Retail; and the reduction of 560,000 gross sq. ft. of Mission Bay South Retail (thereby eliminating that land use designation).
- e. Refer to Table III.B.1 for details on the UCSF development program.
- f. The existing Channel Pump Station, on 1.5 acres of city-owned land, is not proposed for development.
- g. In addition to the acreages shown in the tables, land under I-280 that is not otherwise designated Public Open Space would be designated Public Facilities.
- h. Approximately 2 more acres of public open space would be developed on adjacent port property outside of the Project Area as an expanded bayfront open space area.

Source: Catellus Development Corporation and San Francisco Redevelopment Agency.

This combination of variants currently under consideration by project sponsors would not create significant impacts beyond those already identified in the Draft SEIR based on the environmental assessment of the variants individually. In one case, the combination of variants would create a new significant transportation intersection impact in comparison to the proposed project. The impact, along with mitigation measures that would reduce it to a less-than-significant level, is identified in the assessment of Variant 3, No Berry Street Crossing (Chapter VII, pp. VII.23-VII.24).

As stated on p. VII.1a, each variant is available for selection by the project sponsors, and any combination of variants could be approved.

Even if all variants were to be adopted, the following assessment confirms that no new significant impacts other than those identified above for each individual variant (i.e., Variants 1, 2, 3A, and 5) would occur. The following assessment summarizes minor differences in environmental effects resulting from this combination of variants, as compared to those of the proposed project.

#### Plans, Policies, and Permits

The plans, policies, and permits issues of the combination of variants would be substantially the same as those of the proposed project. Development of the expanded bayfront open space between Piers 54 and 64 under this combination of variants would require additional amendments to the Waterfront Land Use Plan to reflect the proposed open space use. In the Mission Bay South Redevelopment Plan, the Mission Bay South Retail land use designation would be eliminated on the Castle Metals block and the Esprit site, and the area to be designated Commercial Industrial/Retail would expand. A new height zone would also be added to reflect the Castle Metals variant. These changes would not raise new plan, policy, or permitting issues.

As with the proposed project, this combination of variants would require the Peninsula Corridor Joint Powers Board (JPB) support and the California Public Utilities Commission (CPUC) approval of the formal closing of the King and Seventh Street at-grade crossing and of the proposed construction of an at-grade crossing at The Common and Seventh Street. In contrast to the proposed project, this combination of variants would require the associated JPB support and CPUC approval of the removal of two sets of Caltrain tracks to widen the right-of-way along both sides of Caltrain, thus providing space for the extension of Berry Street to Common Street.

#### Land Use

In summary, this combination of variants would reduce city-serving retail space, increase commercial/industrial space, and develop an expanded bayfront open space area outside of the Project Area. A small commercial building would be permitted in the open space within the Project Area near Pier 64. This combination of variants would not have land use impacts substantially different from those of the proposed project. The realignment of Terry A. Francois Boulevard and the integrated development of the Project Area open space with the additional 2 acres of adjacent port property would create an expanded bayfront open space area. Until the existing buildings were demolished for the development of open space on the Port-owned 2 acres, this variant would limit access to



the existing maritime service uses—the boat storage yard and the small-boat repair use south of Pier 54—by realigning the roadway that now provides direct vehicular access for these uses. As currently contemplated by the project sponsors, these uses would have indirect access via a driveway through the parking lot proposed at the north end of the public open space to a roadway extending south. Future users of these port properties could not be assured of direct vehicular access for employees, patrons, or deliveries, which, under the project, would continue to be provided by Terry A. François Boulevard. The Port would consider whether alternative access and parking arrangements are required, depending on existing and proposed uses, in its assessment of the potential for disturbance and/or displacement of such uses. Once the port property was developed as open space, the access issues would no longer exist because the affected buildings would be demolished.

In the Project Area's northeastern-most block, city-serving retail development would be reduced 50% (111,000 gross sq. ft.) due to the somewhat reduced access to that block without the Berry Street at grade railroad track crossing proposed by the project. The proposed Mission Bay South Retail land use designation on the Esprit site and the Castle Metals Block would be changed to Commercial Industrial/Retail. This change would eliminate the Mission Bay South Retail land use designation and would intensify uses on those sites, but it would not introduce new land uses compared to the proposed project. Commercial Industrial uses would increase by 1,064,000 gross sq. ft. and retail uses would decrease by 455,000 gross sq. ft.

The reduction in city-serving retail would change retail development patterns in the Project Area and Nearby Areas for this combination of variants in comparison to the proposed project. Without the larger amount of city-serving retail development in Mission Bay under this combination of variants, it would be more likely that other city-serving retail space would be developed in suitable locations in Nearby Areas. Mission Bay residents, businesses, and employees would do more of their retail shopping outside the Project Area (see section on Business Activity, Employment, Housing, and Population, below).

#### **Business Activity, Employment, Housing, and Population**

This combination of variants would reduce city-serving retail development and increase Commercial Industrial development compared to the proposed project. Those land use differences would change related employment estimates for the Project Area. Overall, there would be 1,313 more jobs in the Project Area, about 4% more employment than expected under the proposed project. There would be 1,617 fewer city-serving retail jobs, 1,690 more office jobs, and 1,240 more research and development or light industrial jobs. The net difference in employment between this variant and the proposed project would be 310 fewer jobs in Mission Bay North and approximately 1,003 more jobs in Mission Bay South. The additional non-residential development would create minor changes in four aspects of the business activity, employment, housing, and population assessment in comparison to that for the proposed project: 1) jobs/housing balance conclusions; 2) housing market impacts; 3) development patterns in Nearby Areas (see Growth Inducement below); and 4) the buildout period.

Compared to the proposed project, housing demand in San Francisco associated with Project Area employment growth would be higher with this combination of variants while the housing supply of 6,090 units would be the same as under the proposed project. Consequently, this combination of variants housing demand in San Francisco associated with Project Area employment growth would exceed housing supply in the Project Area by about 4,100 units in contrast to the 3,700 units under the project (including UCSF employment-related demand). As a result, housing market impacts would be somewhat higher than those identified for the proposed project (but these would be socioeconomic effects, not significant impacts under CEQA). However, since the City's OAHPP Ordinance (or an exaction of equivalent or greater benefit) would apply to non-Catellus owned private property on the Castle Metals block and the Esprit site, some additional housing supply related to office development would occur under this combination of variants if office uses were developed on those sites./9/

The variant would accommodate about 19% more Commercial Industrial development than would the proposed project. The most likely consequences of the higher commercial industrial development under this combination of variants is that it would take the market longer to absorb the additional development (i.e., build and occupy) than would be the case for the smaller amount of space proposed for the project. It would be expected that there would be little difference in Mission Bay employment and total San Francisco employment in 2015 compared to the proposed project; but all Commercial Industrial development in the Project Area would not be built and occupied by 2015 under this combination of variants as it would under the proposed project.

Another possible consequence of the higher amount of commercial industrial development is that Mission Bay would attract more demand from businesses that would otherwise locate elsewhere in the City. Total employment growth in San Francisco would not be different but more of it would be concentrated in the Project Area by 2015. As a result, there would be less demand for new development and renovated warehouse and industrial space in Nearby Areas such as parts of the downtown near the Transbay Terminal, South of Market, North Potrero, Inner Mission, and the Central Waterfront and, therefore, more options in those areas for lower-rent-paying businesses.

Overall for the Project Area, city-serving retail under this combination of variants would be about 28% of the amount associated with the proposed project (72% less). Without the larger amount of city-serving retail development in the Project Area, it would be more likely that city-serving retail space would be developed in suitable locations in Nearby Areas such as the western South of Market, Inner Mission, North Potrero, Central Waterfront, and South Bayshore. Mission Bay residents, businesses, and employees would do more of their retail shopping outside the Project Area, and Mission Bay would not attract as much retail spending from other San Francisco residents as would be the case under the proposed project.

#### Visual Quality and Urban Design

This combination of variants would not change the overall visual effect of the proposed project. The realignment of Terry François Boulevard would accentuate the project's eastern edge with the Boulevard relocated next to the developed areas, and would open up



views of the bay from the expanded bayfront open space development. Views of the Esprit site and the Castle Metals block would be of office, light industrial, or research buildings instead of lower retail buildings under the proposed project.

There would be a new Height Zone on a portion of the Castle Metals block fronting Third and Mariposa Streets. The allowable 160-foot tower in the new Height Zone would be in addition to the 16 permitted under the project in Mission Bay South, and would be in addition to the two 160-foot towers permitted under the project's Height Zone 6 on the Castle Metals block bounded by 16th, Third, Mariposa and Owens Streets. One additional building of this height would not be substantially different from that of the project. The reduced retail development associated with no Berry Street crossing would reduce building massing on the northeastern-most block of the Project Area.

### Transportation

Roadway modifications under this combination of variants include the realignment of Terry A. François Boulevard to the west to provide open space closer to the waterfront. There would be no at-grade rail crossing at Berry Street, and Berry Street would be extended around the end of China Basin Channel to intersect with The Common immediately east of the Caltrain tracks. These roadway modifications would provide emergency access from Seventh Street by crossing the median between South and North Common Streets. They would provide direct egress from Mission Bay North's west end to Seventh Street. They would also provide fairly direct access from Mission Bay South to Mission Bay North that would not be dependent on bridges. Pertinent land use changes are discussed above under "Description."

In summary, these land use changes would change p.m. peak hour trip generation as follows: 2,765 fewer person trips; 1,150 fewer vehicle trips (in- and outbound); fewer inbound transit trips but 40 more outbound transit trips; 10 more inbound and 200 more outbound bicycle and pedestrian trips. The 2,765 fewer p.m. peak hour person trips under this combination of variants would be a reduction of approximately 8% in comparison to the proposed project. Table VII.G.3 compares the p.m. peak hour person trip generation from this combination with that of the project.

The increase in non-automobile trips under this variant would be substantially less than the decrease in automobile trips. This is caused by the different trip generation rates of commercial industrial land use compared to retail land use. The bicycle and pedestrian network proposed for the project would be able to accommodate the additional trips produced under this combination of variants under consideration by project sponsors.

The additional outbound transit trips created by these land uses represent an increase of less than 1% compared to the total project. They would be distributed primarily to the East Bay and South Bay. Caltrain would have sufficient capacity to carry the individuals destined for the South Bay, and all of the additional East Bay passengers could be accommodated on BART with an approximate increase of 0.4% in the p.m. peak hour load factor compared to the project. The additional outbound transit trips would increase the Third Street light rail northbound load factor in the vicinity of Mission Bay from 77%

**TABLE VII.G.3 (new)**  
**PM PEAK HOUR PERSON TRIP GENERATION IN 2015**  
**COMBINATION OF VARIANTS COMPARED WITH PROJECT**

| Area              | Project | Combination of Variants | Difference |
|-------------------|---------|-------------------------|------------|
| Mission Bay North | 11,030  | 10,710                  | -320       |
| Mission Bay South | 22,470  | 20,025                  | -2,445     |
| Total             | 33,500  | 30,735                  | -2,765     |

*Source:* Wilbur Smith Associates

to 85%. The load factor would decrease from 84% to 80% for Third Street light rail in the southbound direction in the vicinity of Mission Bay.

The reduction of automobiles in the Mission Bay street network suggests that overall traffic and parking conditions in 2015 would improve slightly under this combination of variants compared with the proposed project, particularly in Mission Bay South. The total parking demand for this combination of variants would be approximately 1,630 spaces, or 6% less than the total parking demand for the project. Parking supply would be about 1,135 fewer spaces than that calculated for the project (shown in Table V.E.17, p. V.E.97). The resulting deficit would be a total of about 4,300 spaces, or about 430 spaces less than the project parking deficit. The less direct access to the western portion of Mission Bay North would likely slightly increase traffic congestion at Third and Fourth Street intersections in and near the Project Area, and would cause the intersection of Seventh Street and The Common to carry more traffic than under the project.

Table VII.G.4 compares some key intersection levels of service (LOS) under this combination of variants with those of the project. Average delays at all but four of these intersections would improve to some extent, with three intersections experiencing improvements in levels of service. The intersection of Seventh Street and The Common would improve from an unacceptable level of service to LOS D, due to the improved lane geometry proposed as part of Variant 3A, even with the greater number of vehicles. The intersections of Fourth and Townsend Streets, Fourth and 16th Streets, Third and King Streets, and Fourth and King Streets would experience an approximately 7% to 26% increase in average vehicle delay, with the intersection of Fourth and King Streets operating at an unacceptable LOS E under the project and an unacceptable level of service F under this combination of variants.



**TABLE VII.G.4 (new)**  
**YEAR 2015 INTERSECTION LEVEL OF SERVICE COMPARISON**  
**COMBINATION OF VARIANTS COMPARED WITH PROJECT**

| Intersection                                | Project         |     | Combination of Variants |     |
|---|-----------------|-----|-------------------------|-----|
|   | Delay (sec/veh) | LOS | Delay (sec/veh)         | LOS |
| Fourth and Townsend Streets                 | 14.4            | B   | 18.2                    | C   |
| Third and Townsend Streets                  | 79.7            | F   | 78.8                    | F   |
| Fifth and King Streets                      | 28.4            | D   | 26.3                    | D   |
| Fourth and King Streets                     | 52.1            | E   | 63.3                    | F   |
| Third and King Streets                      | 99.1            | F   | 114.4                   | F   |
| 16th and Seventh Streets                    | 32.2            | D   | 16.9                    | C   |
| 16th and Fourth Streets                     | 29.2            | D   | 31.4                    | D   |
| 16th and Third Streets                      | 25.2            | D   | 17.3                    | C   |
| Mariposa Street/I-280 on-ramp               | 16.6            | C   | 16.4                    | C   |
| Mariposa and I-280<br>off-ramp/Owens Street | 35.9            | D   | 29.2                    | D   |
| Mariposa and Fourth Streets                 | 13.6            | B   | 10.2                    | B   |
| Mariposa and Third Streets                  | 23.7            | C   | 18.6                    | C   |
| Seventh Street and The<br>Common            | 42.3            | E   | 30.0                    | D   |

*Source:* Wilbur Smith Associates

**This significant impact at Fourth and King Streets would be similar to that described for Variant 3, in Table VII.C.2 and accompanying text. Thus, this combination of variants would cause significant traffic impacts at the same intersections as the project and would reduce significant traffic impacts at one intersection, compared to the project. The same mitigation measures proposed for the intersections of Fourth and King Streets, Third and Townsend Streets, and Third and King Streets for the project would also mitigate the operation of the intersections to acceptable levels of service under this combination of variants.**

**Under this variant, the intersection of Seventh and Berry Streets would not require project features E.20a, E.20b, and E.20c, as described on page VI.12, which include a traffic signal, opening the rail crossing, and providing rail crossing warning devices. Mitigation measure E.31b, noted on page VI.19, which involves restriping the northbound and southbound approaches to this intersection, would need to be modified to include restriping the northbound approach to provide a left-through lane and a through lane, and the southbound approach to provide a right-through lane and a through lane, relating to the portion of Berry Street west of Seventh Street.**

## Air Quality

As described below, this combination of variants would have the same significant air quality impacts and require the same mitigation measures as the proposed project. The change in land use under this combination of variants would slightly alter traffic patterns and the number of vehicle trips in and around the Project Area. Vehicular emissions would be reduced by 8.5% compared with those of the proposed project. As shown in Table VII.G.5, vehicular emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> would exceed the BAAQMD significance thresholds for regional air quality impacts, as would emissions under the project. Trip reduction measures discussed in Mitigation Measure E.47 in Section VI.E, Mitigation Measures: Transportation, would not reduce emissions of criteria pollutants below BAAQMD significance thresholds. Therefore, as under the project, these vehicular emissions would pose an unavoidable significant regional air quality impact.

Due to the level of carbon monoxide emissions expected for the project overall as shown in Table VII.G.5, four of the 13 intersections modeled for the proposed project were selected for further micro-level analysis for this combination of variants./10/ No exceedances of federal or state one-hour or eight-hour standards would occur at any of the four intersections modeled as a result of traffic emissions associated with this combination of variants. These results, provided in Table VII.G.6, are similar to those for the proposed project.

**TABLE VII.G.5 (new)**  
**ESTIMATED VEHICULAR EMISSIONS**  
**FOR COMBINATION OF VARIANTS TRAFFIC, YEAR 2015**

| Pollutants                             | BAAQMD<br>Threshold (lb/day) | Vehicular Emissions<br>(lb/day) |             |
|--|------------------------------|---------------------------------|-------------|
|  |                              | Project                         | Combination |
| Reactive Organic Gases (ROG)           | 80/a/                        | 865                             | 791         |
| Nitrogen Oxides (NO <sub>x</sub> )     | 80/a/                        | 1,324                           | 1,211       |
| Particulate Matter (PM <sub>10</sub> ) | 80/a/                        | 1,968                           | 1,801       |
| Carbon Monoxide (CO)                   | 550/b/                       | 12,228                          | 11,187      |

*Notes:*

- a. The BAAQMD regards this amount of emissions as a threshold of significance for a regional impact.
- b. For carbon monoxide, the BAAQMD does not regard 550 lb/day as a threshold of significance, but rather, an indicator to perform microanalysis.

*Source:* EIP Associates. Based on modeling using the California Air Resources Board's URBEMIS Model, Version 5.



**TABLE VII.G.6 (new)**  
**ESTIMATED LOCAL CARBON MONOXIDE CONCENTRATIONS AT**  
**SELECTED INTERSECTIONS FOR THE COMBINATION OF VARIANTS IN**  
**2015**

| Intersection           | CO Concentrations (ppm) |               |                         |               |
|------------------------|-------------------------|---------------|-------------------------|---------------|
|                        | Proposed Project/a/     |               | Combination of Variants |               |
|                        | One Hour/b/             | Eight Hour/c/ | One Hour/b/             | Eight Hour/c/ |
| Third and 16th         | 11.0                    | 6.3           | 10.7                    | 6.2           |
| Third and King         | 13.6                    | 7.6           | 13.1                    | 7.3           |
| Fourth and Bryant      | 8.3                     | 5.3           | 8.4                     | 5.3           |
| Eighth and<br>Townsend | 9.9                     | 5.4           | 8.8                     | 5.3           |

*Notes:*

ppm = Parts per million.

a. Refer to Table V.F.5 and associated text in Section V.F, Air Quality.

b. The state one-hour standard is 20 ppm; the federal one-hour standard is 35 ppm.

c. The state and federal eight-hour standards are 9 ppm.

*Source:* EIP Associates.

The decrease in overall traffic under this combination of variants would reduce toxic air contaminant emissions from mobile sources by about 8.5%. The significance of health risks from toxic air contaminants is unknown, but assumed to be at least potentially significant, as for the project. Toxic air contaminants from stationary sources, such as various organic solvents associated with research and development and light manufacturing operations, would increase. This combination of variants could result in about 19% more emissions of toxic air contaminants from stationary sources than the proposed project, due to the increase in research and development and light industrial uses under the variant. As under the project, combined emissions of toxic air contaminants from stationary sources would be a potentially significant impact under this combination of variants.

### Noise and Vibration

Due to reductions in future traffic volumes projected for intersection links compared with the project, this combination of variants would generate noise levels lower than those projected for the project at the study locations of Potrero Avenue south of 16th Street; Berry Street west of Fourth Street; Fourth/Minnesota Streets, south of Mariposa Street; and Mariposa Street, west of DeHaro. At the intersections of Pennsylvania Street south of Mariposa Street, The Common south of Owens Street, and Third Street south of Mission Rock Street noise levels, would remain essentially unchanged under this combination of variants conditions compared to noise levels shown for the project because

projected traffic volumes on these links would remain unchanged. Terry A. François Boulevard would not be realigned close enough to residential buildings for associated traffic noise to affect sensitive receptors.

Vibration effects from the MUNI Third Street light rail vehicles along Third and Fourth Streets and from freight rail along 16th Street would be similar to the effects described for the project and would not be expected to be significant. Freight rail tracks would remain near the water's edge, as they are now, and would not be in the realigned Terry A. François Boulevard right-of-way adjacent to commercial industrial land uses. Therefore, vibration effects would be the same as those described for the project.

#### Seismicity

This combination of variants would not alter the geologic, soils, or seismic conditions in the Project Area, and would not, therefore increase associated seismic impacts. The increase in the additional Commercial/Industrial/Retail space would increase the daytime employment population in an area designated as seismically hazardous. The absence of a crossing of the railroad tracks at Berry Street and the extension of Berry Street south to Common Street would make emergency access more difficult in comparison to the proposed project (see discussion under Community Services and Utilities).

#### Health and Safety

The nature of the combination of variants' health and safety impacts would be essentially the same as with the project. As with the project, impacts would be reduced to a less-than-significant level with the mitigation measure proposed for the project. This combination of variants would increase the amount of Commercial Industrial space for the project as a whole by about 19%; therefore, hazardous materials quantities estimated for Commercial Industrial activities in "Estimated Hazardous Materials Quantities," in Section V.I, Health and Safety: Impacts, would be about 19% greater. This could result in a roughly proportional increase in the magnitude of environmental impacts related to handling biohazardous materials, handling materials that pose substantial hazards of release or explosions, and generating hazardous wastes. With the reduction in retail space, there would be an associated reduction in hazardous waste generated by retail activities.

#### Contaminated Soils and Groundwater

The impacts of chemicals in the soil and groundwater of the Project Area for this combination of variants would be similar to those described for the project (see information about existing chemicals in soil and groundwater in the Project Area, including the petroleum free product plume in the southeastern part of Mission Bay South, remains as described in Section V.J, Contaminated Soils and Groundwater: Setting, pp. V.J.1 - V.J.57). As with the open space in the Project Area, the adjacent public open space on port property would be subject to an RMP. Users of the public open space proposed to be located along the Bay shore adjacent to Terry A. François Boulevard in this variant would not be exposed to chemicals under the existing paved



roadway, because the RMP would require that the open space be covered with horticultural-quality fill or other approved materials or with landscaped paved areas (see description in Chapter VII, Variant 1: Terry François Boulevard Variant, pp. VII.8-VII.10). The soil and groundwater affected by hydrocarbons in the southeast portion of the Project Area under 16th Street, a portion of Terry A. François Boulevard, and the Esprit site, will be addressed independently of the proposed project as required by the Regional Water Quality Control Board under its cleanup order. The increase in Commercial Industrial/Retail use and decrease in Retail space on the Castle Metals block or the Esprit site would not alter the project's analysis for these sites.

The assumptions, results, and mitigation measures for the project would be applicable to this combination of variants. They would reduce to a level of insignificance any risks that might result from construction and occupancy of proposed sites in the Project Area and from use of public open space proposed to be located in the existing alignment of Terry A. François Boulevard and on adjacent port property in the future.

#### **Hydrology and Water Quality**

The hydrology and water quality effects of this combination of variants would be similar to those of the proposed project (see "Quality of Municipal Wastewater from the Project" and "Evaluation of Potential Water Quality Impacts" in Section V.K, Hydrology and Water Quality, pp. V.K.1-V.K.70). Realigning Terry François Boulevard and developing the expanded bayshore open space area would add a minor potential filtering function for runoff flowing from the rerouted part of Terry A. François Boulevard to the Bay if the open space is landscaped as proposed by Catellus (i.e., soils and plants), but not if it is paved (i.e., with asphalt or paved athletic areas) (see p. VII.10). The increase in research and development and light industrial space would have minor effects on the range and degree of hydrology and water quality impacts described for the proposed project.

#### **Vegetation and Wildlife**

The land use changes under this combination of variants and the extension of Berry Street would not substantially alter the effects on the Channel or the Bay from those of the proposed project. If the expanded bayfront open space proposal were to include design features that would be constructed along the shoreline or in the bay, such activities would be subject to a range of agency permitting requirements. Other aspects of this combination of variants would be the same as the project.

#### **Community Services and Utilities**

The effects of this combination of variants on community services and utilities would be similar to those described for the proposed project (see Section V.M, Community Services and Utilities, pp. V.M.1-V.M.66). The expanded bayshore open space proposal would provide an additional 2 acres of integrated bayfront open space outside the Project Area. Employment would increase by about 4% compared to the proposed project. This would not cause an appreciable change in estimated project demand for community services or utilities. This combination of variants would make fire, ambulance, and police access to

the mixed-use parcel west of I-280 more difficult than for the project, but not so difficult as to constitute a significant impact as would be the case under Variant 3, p. VII.29. Fire and ambulance emergency vehicles would negotiate a combination turn off Seventh Street onto Common Street, across a low raised median at the west end of Common Street, and onto the Berry Street extension. Police vehicles might not be able to cross the median, in which case they would need to drive along South Common Street to the roundabout and back along North Common Street to the proposed Berry Street extension. The restriction created by the combination turn or the trip through the roundabout could cause delays in emergency access to the mixed-use parcel west of I-280 or to the residential parcels west of Fifth Street. This would not be considered a new significant impact because the proposed emergency access routes, although slightly circuitous, would be available if the Third or Fourth Street Bridges were raised or rendered inoperational (which could cause major delays or eliminate access). The restriction would be ameliorated if the fire station for Mission Bay South were to be built (see Mitigation Measures H.5, p. VI.38, and M.6, p. VI.54).

#### **Growth Inducement**

The larger amount of Commercial Industrial Retail development under the variant has the potential to result in slightly more total employment growth in San Francisco (by attracting more new businesses to the City than would be the case under the proposed project), or to slightly change development patterns in the City (by attracting businesses that would otherwise locate in Nearby Areas). The most likely outcome, given the magnitude of the change, is that there would be little difference in Mission Bay development and employment growth by 2015, and therefore little difference in cumulative citywide and regional employment growth and in the growth inducement impact assessment for the proposed project. Although neither the pace of development at Mission Bay nor of economic growth city-and region-wide would change under this combination of variants, the larger amount of Commercial Industrial development would take longer to be built and occupied.

#### **SUMMARY OF MITIGATION MEASURES**

All significant impacts identified for the project would also occur with this variant. Correspondingly, all mitigation measures in Chapter VI, Mitigation Measures, would apply, with the exception that the at-grade rail crossing at Berry Street would not be a feature of the project, and therefore Mitigation Measures E.20a, E.20b, and E.20c for the intersection of Seventh Street and Berry Street (see p. VI.12) would not be applicable. Further, Mitigation Measure E.31b (p. VI.19) for Seventh and Berry Streets would be modified as follows if this combination of variants were adopted, to remove references to left and right turn lanes that would cross the railroad track and add turn lanes to the portion of Berry Street west of Seventh Street:

**Restripe the northbound ~~and southbound~~ approaches to provide a shared left-through left-turn lane and a through lane, and restripe the southbound approach to provide a through lane and a shared right-through lane.**



The mitigation measure for the intersection of Fourth and King Streets differs slightly from that proposed for the project as Mitigation Measure E.38 on p. VI.20. It would be the same as that proposed for Variant 3 on p. VII.24. The project mitigation measure identifies one exclusive left-turn lane, two exclusive through lanes, and one exclusive right-turn lane for the southbound approach of Fourth Street at King Street. The measure identified for the combination of variants would include an exclusive left-turn lane, one exclusive through lane, a shared right-through lane, and an exclusive right-turn lane for the southbound approach to the intersection of Fourth Street. Implementation of the mitigation measure for the variant would require the same increase in street width as for the proposed project.

This combination of variants includes reconfiguration of Seventh Street at Common Streets, and, in effect, implements Mitigation Measure E.32 identified for the project.

Other transportation mitigation measures would be the same as those identified for the project.

The following new endnotes have been added to p. VII.66:

8. The decrease of 566,000 gross sq. ft. of City-serving retail uses would include a decrease of 111,000 gross sq. ft. in Mission Bay North and 470,000 gross sq. ft. on the Esprit site and the Castle Metals block in Mission Bay South and an increase of 15,000 gross sq. ft. in the open space near Pier 64.
9. San Francisco Redevelopment Agency, Mission Bay South Redevelopment Plan, Section 304.10, Fees and Exactions: Parcels X2, X3, and X4.
10. To account for a possible shift in traffic patterns, carbon monoxide concentrations at the intersections of Seventh and Townsend Streets and Potrero and 16th Streets were also analyzed, but not included in the comparison between the proposed project and the combination of variants, because the analysis showed that traffic increases at these intersections would not be substantially different.

The following has been added on p. II.40 as new text before the heading “E. Alternatives to the Proposed Project” in the Summary.

#### **COMBINATION OF PROJECT FEATURES AND VARIANTS CURRENTLY UNDER CONSIDERATION BY THE PROJECT SPONSORS**

The project sponsors are considering a combination of variants to the proposed project as a result of public comments and from refinements to the project made by the project sponsors since publication of the Draft SEIR. This combination of variants, as shown on the inside front cover, includes:

- A modified Variant 1, the Terry A. François Boulevard Variant, would realign Terry A. François Boulevard to the west to allow development of open space to

the east closer to the San Francisco Bay, would permit Catellus to develop open space on 2 acres of adjacent port property outside the Project Area to create an expanded bayfront open space, and also would permit a small recreation-oriented commercial building to be developed on the adjacent open space within the Project Area;

- Variant 2, the Esprit Variant, would change the land use designation on that site from Mission Bay South Retail to Commercial Industrial/Retail;
- A new Variant 3A, the Modified No Berry Street Crossing Variant, would extend Berry Street south to Common Street, rather than have a railroad crossing at Berry Street, and would reduce the retail space in the northwestern-most project block by 50%; and
- A new Variant 5, the Castle Metals Block Variant, would change the land use designation on that site from Mission Bay South Retail to Commercial Industrial/Retail.

This combination of variants currently under consideration by project sponsors would not create significant impacts beyond those already identified in the Draft SEIR based on the environmental assessment of the variants individually. For example, the Berry Street extension under this combination of variants would somewhat reduce access to Mission Bay North from the west compared to the project, but not as much as would Variant 3. Even if all variants were to be adopted, the environmental assessment confirms that no new significant impacts other than those identified for each variant would occur.

## CHAPTER VIII, ALTERNATIVES TO THE PROPOSED PROJECT

Tables VIII.A.5 on p. VIII.23, VIII.B.5 on p. VIII.66, and VIII.C.5 on p. VIII.106 have been revised to correct the project numbers for average delay at intersections, as shown in Table V.E.10, pp. V.E.69-V.E.71. The revisions do not necessitate changes to the SEIR text, nor do they affect the analysis or conclusions of the SEIR. Revised delay numbers are underlined.



**TABLE VIII.A.5 (revised)**  
**INTERSECTION LEVELS OF SERVICE**  
**ALTERNATIVE 1 COMPARED TO PROJECT**  
**PM Peak Hour 2015 Cumulative Conditions**

| Study Intersection                | 2015 Cumulative with Project |          | 2015 Cumulative with Alternative 1 |     |
|-----------------------------------|------------------------------|----------|------------------------------------|-----|
|                                   | Avg. Delay (sec./veh.)       | LOS      | Avg. Delay (sec./veh.)             | LOS |
| Third St./King St.                | 99.1                         | F        | 39.7                               | D   |
| Fourth St./King St.               | <u>52.1</u>                  | E        | 23.0                               | C   |
| Fifth St./King St.                | 28.4                         | D        | 11.5                               | B   |
| Seventh St./Townsend St.          | <u>195.3</u>                 | F        | 78.4                               | F   |
| Sixteenth St./Potrero Ave.        | 162.7                        | F        | 28.8                               | D   |
| Sixteenth St./Vermont St.         | 200.4                        | F        | 71.0                               | F   |
| Sixteenth St./Seventh St.         | 32.2                         | D        | 7.5                                | B   |
| Sixteenth St./Third St.           | <u>25.2</u>                  | D        | 14.1                               | B   |
| Mariposa/I-280 On-ramp            | 16.6                         | C        | 20.4                               | C   |
| Mariposa/Owens St./I-280 Off-ramp | 35.9                         | D        | 18.4                               | C   |
| Third St./Mariposa St.            | <u>23.7</u>                  | <u>C</u> | 17.0                               | C   |

Source: Wilbur Smith Associates.

**TABLE VIII.B.5 (revised)**  
**SUMMARY OF PROJECT INTERSECTION LEVELS OF SERVICE**  
**ALTERNATIVE 2 COMPARED TO PROJECT**  
**PM Peak Hour 2015 Cumulative Conditions**

| Study Intersection                | 2015 Cumulative with Project |          | 2015 Cumulative with Alternative 2 |     |
|-----------------------------------|------------------------------|----------|------------------------------------|-----|
|                                   | Avg. Delay (sec./veh.)       | LOS      | Avg. Delay (sec./veh.)             | LOS |
| Third St./King St.                | 99.1                         | F        | 58.1                               | E   |
| Fourth St./King St.               | <u>52.1</u>                  | E        | 29.0                               | D   |
| Fifth St./King St.                | 28.4                         | D        | 36.9                               | D   |
| Seventh St./Townsend St.          | <u>195.3</u>                 | F        | 103.2                              | F   |
| Sixteenth St./Potrero Ave.        | 162.7                        | F        | 30.2                               | D   |
| Sixteenth St./Vermont St.         | 200.4                        | F        | 72.3                               | F   |
| Sixteenth St./Seventh St.         | 32.2                         | D        | 7.6                                | B   |
| Sixteenth St./Third St.           | <u>25.2</u>                  | D        | 13.1                               | B   |
| Mariposa/I-280 On-ramp            | 16.6                         | C        | 21.8                               | C   |
| Mariposa/Owens St./I-280 Off-ramp | 35.9                         | D        | 15.8                               | C   |
| Third St./Mariposa St.            | <u>23.7</u>                  | <u>C</u> | 17.4                               | C   |

Source: Wilbur Smith Associates.



**TABLE VIII.C.5 (revised)**  
**INTERSECTION LEVELS OF SERVICE**  
**ALTERNATIVE 3 COMPARED TO PROJECT**  
**(PM Peak Hour 2015 Cumulative Conditions)**

| Study Intersection                | 2015 Cumulative with Project |          | 2015 Cumulative with Alternative 3 |     |
|-----------------------------------|------------------------------|----------|------------------------------------|-----|
|                                   | Avg. Delay (sec./veh.)       | LOS      | Avg. Delay (sec./veh.)             | LOS |
| Third St./King St.                | 99.1                         | F        | 41.8                               | E   |
| Fourth St./King St.               | <u>52.1</u>                  | E        | 38.2                               | D   |
| Fifth St./King St.                | 28.4                         | D        | 18.3                               | C   |
| Seventh St./Townsend St.          | <u>195.3</u>                 | F        | 122.9                              | F   |
| Sixteen St./Potrero Ave.          | 162.7                        | F        | 85.7                               | F   |
| Sixteenth St./Vermont St.         | 200.4                        | F        | 137.8                              | F   |
| Sixteenth St./Seventh St.         | 32.2                         | D        | 8.8                                | B   |
| Sixteenth St./Third St.           | <u>25.2</u>                  | D        | 11.9                               | B   |
| Mariposa/I-280 On-ramp            | 16.6                         | C        | 14.5                               | B   |
| Mariposa/Owens St./I-280 Off-ramp | 35.9                         | D        | 20.4                               | C   |
| Third St./Mariposa St.            | <u>23.7</u>                  | <u>C</u> | 15.0                               | C   |

*Source:* Wilbur Smith Associates.

## CHAPTER XIII, REPORT OUTLINE

The report outline has been revised to reflect the headings, organization, and page numbers of the Final EIR.

## APPENDICES

### Appendix D, Transportation

Appendix D, Transportation, p. D.20, has been revised to clarify that a new traffic signal would not be needed where Fourth Street intersects the main entrance to UCSF between Third and Fourth Streets west of South Street. Instead, South Street within the UCSF site would be a pedestrian plaza with

emergency vehicle access only. The new traffic signal or signal upgrade would instead be provided in another area serving the UCSF site, most likely on Owens Street at a future street intersection.

The next-to-last sentence on p. D.20 has been deleted and replaced with the following:

~~A new traffic signal would be installed where Fourth Street intersects the main entrance to UCSF, a private street expected to extend between Third and Fourth Streets west of South Street.~~ A new traffic signal may be provided to serve the UCSF site at a future intersection of a private UCSF street with Owens Street, or with another Project Area street adjacent to the UCSF site.

## Appendix J, Hydrology and Water Quality

As explained under Hydrology and Water Quality, "Illustrative Mitigation Scenarios" on p. XII.264, Tables J.1 through J.7 (presented as an appendix to this Summary of Comments and Responses document) have been added to Appendix J, Hydrology and Water Quality, following p. J.7.

## Appendix L, Community Services and Utilities

The text of Notes h and j to Table L.4 on p. L.12 has been switched. The revised notes are as follows:

- h. Irrigation value is a daily value averaged throughout the year. Water consumption may be higher in the summer and lower in the winter.
- j. The Total Non-Potable Water Demand estimate is a conservatively large value for the proposed project. All commercial buildings are assumed to have dual-piping; but some buildings may be smaller than 40,000 square feet, thus not requiring dual-piping. Additionally, Catellus engineers believe the cooling system water demand factor (6 gal/100 gsf) is relatively high.

## ADDITIONAL CORRECTIONS

An asterisk, indicating that the referenced document is available for review at the Planning Department, has been added to endnotes as necessary.

A number of non-substantive typographical and grammatical errors have been corrected.

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### NOTES: Staff-Initiated Text Changes

1. Lucian R. Blazej, Executive Director, Facilities Development and Management, San Francisco Unified School District, telephone conversation with EIP Associates, August 12, 1998.



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\* These commentors submitted comments during the public review period that did not address the Draft SEIR, and consequently were not included in this document. These comments are available in the project files at the Planning Department, 1660 Mission Street.



**TABLE J.1**  
**CHANGES IN EFFLUENT, OVERFLOW, AND STORMWATER VOLUMES**

|   | Bayside Base Case + Project |             |                           | Bayside Base Case + Mitigation A |                           |                                | Bayside Base Case + Mitigation B |                           |                                |
|---|-----------------------------|-------------|---------------------------|----------------------------------|---------------------------|--------------------------------|----------------------------------|---------------------------|--------------------------------|
|   | Flow Volume                 | Flow Volume | Change from Base Case (%) | Flow Volume                      | Change from Base Case (%) | Change from Base + Project (%) | Flow Volume                      | Change from Base Case (%) | Change from Base + Project (%) |
| Bayside Effluent (Deep Water) (MG/yr)                 | 30,203                      | 31,045      | 842 (2.8%)                | 31,047                           | 844 (2.8%)                | 2 (0.0064%)                    | 30,992                           | 789 (2.6%)                | -53 (-0.17%)                   |
| Bayside Overflows (MG/yr)                             | 910                         | 912         | 2 (0.22%)                 | 910                              | 0 (0%)                    | -2 (-0.22%)                    | 877                              | -33 (-3.6%)               | -35 (-3.8%)                    |
| Project Area Stormwater Discharge (MG/yr) /a/         | 15.6                        | 15.9        | 0.4 (2.6%)                | 15.9                             | 0.4 (2.6%)                | 0 (0%)                         | 107.2                            | 91.6 (590%)               | 91.3 (570%)                    |
| Other Bayside (Non-Project Area) Stormwater Discharge | N/A                         | N/A         | N/A                       | N/A                              | N/A                       | N/A                            | N/A                              | N/A                       | N/A                            |
| Near-Shore Discharges /b/ (MG/yr)                     | > 926                       | > 928       | 2.4 (0.22%)               | > 926                            | 0 (0%)                    | -2 (-0.22%)                    | > 984                            | 58 (6.3%)                 | 56 (6.0%)                      |

*Notes:*

MG/yr = million gallons per year  
N/A = not available

- a. The stormwater discharges under the Base Case, Project, and Mitigation Scenario A are much less than under Scenario B because under the first three, most of the Project Area stormwater would go to the combined sewer system.
- b. Near-shore waters include China Basin Channel and the Bay waters adjacent to the Bayside. Data are not available from which to derive volumes and quality of direct stormwater discharges from outside the Project Area. The sum of Bayside CSOs plus direct discharges of stormwater along the Bayside understates the actual total near-shore discharge volume. Therefore, the percentage changes shown for the project and Mitigation Scenarios A and B overstate the volume changes from Base Case and Base-Case-plus-Project conditions.

*Source:* City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998, Table 5c; EIP Associates.

**TABLE J.2**  
**ESTIMATED ANNUAL MASS POLLUTANT LOADING TO BAY**  
**FROM BAYSIDE EFFLUENT DISCHARGES**

|   | Bayside<br>Base Case<br>/a/ | Bayside Base Case<br>+ Project | Bayside Base Case<br>+ Mitigation A | Bayside Base<br>Case +<br>Mitigation B |
|---|-----------------------------|--------------------------------|-------------------------------------|--|
| <b>Effluent Volume (MG/yr) /b/</b>                      | 30,203                      | 31,045                         | 31,047                              | 30,992                                 |
| <b>Change in Volume from Base<br/>Case (%) /c/</b>      | —                           | 842 (2.8%)                     | 844 (2.8%)                          | 789 (2.6%)                             |
| <b>Change in Volume from<br/>Base + Project (%) /c/</b> | —                           | —                              | 2 (0.0064%)                         | -53 (-0.17%)                           |
| <b>Monitored Pollutant Load (lb/yr)</b>                 |                             |                                |                                     |  |
| Total Suspended Solids                                  | 4,100,000                   | 4,200,000                      | 4,200,000                           | 4,200,000                              |
| Ammonia, Nitrogen                                       | 5,100,000                   | 5,200,000                      | 5,200,000                           | 5,200,000                              |
| Oil and Grease  | 1,300,000                   | 1,300,000                      | 1,300,000                           | 1,300,000                              |
| Polynuclear Aromatic Hydrocarbons                       | 36                          | 37                             | 37                                  | 37                                     |
| Arsenic   | 530                         | 550                            | 550                                 | 540                                    |
| Cadmium   | 54                          | 55                             | 56                                  | 55                                     |
| Chromium  | 250                         | 260                            | 260                                 | 260                                    |
| Copper  | 2,100                       | 2,200                          | 2,200                               | 2,200                                  |
| Lead  | 880                         | 910                            | 910                                 | 900                                    |
| Mercury   | 17                          | 18                             | 18                                  | 18                                     |
| Nickel  | 1,000                       | 1,000                          | 1,000                               | 1,000                                  |
| Silver  | 530                         | 550                            | 550                                 | 540                                    |
| Zinc  | 13,000                      | 13,000                         | 13,000                              | 13,000                                 |
| Selenium  | 180                         | 190                            | 190                                 | 180                                    |
| Cyanide   | 2,500                       | 2,600                          | 2,600                               | 2,600                                  |

Notes:

MG = million gallons

lb = pounds

yr = year

- Derived from data in City and County of San Francisco, Public Utilities Commission, Bureau of Water Pollution Control - Southeast Plant, Southeast WPCP Monitoring Report December 1997, January 16, 1998.
- Derived from data in City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998, Table 5c.
- The percentage change in load is assumed to be the same as the percentage change in volume. While the percentage change reflects the incremental change that would occur in each analysis scenario, there is a level of imprecision associated with the load calculations. Therefore, all load values have been rounded to two significant figures to reflect the statistical uncertainty of the calculations. The significance of each change was evaluated by determining whether the change falls within the range of uncertainty.

Source: EIP Associates.



**TABLE J.3**  
**ESTIMATED ANNUAL MASS POLLUTANT LOADING TO BAY**  
**FROM BAYSIDE TREATED OVERFLOWS**

|   | Base Case<br>Bayside/a/ | Bayside Base Case<br>+ Project | Bayside Base Case<br>+ Mitigation A | Bayside Base<br>Case +<br>Mitigation B |
|---|-------------------------|--------------------------------|-------------------------------------|--|
| <b>Overflow Volume (MG/yr) /b/</b>                      | 910                     | 912                            | 910                                 | 877                                    |
| <b>Change in Volume from Base<br/>Case (%) /c/</b>      | —                       | 2 (0.22%)                      | 0 (0%)                              | -33 (-3.6%)                            |
| <b>Change in Volume from<br/>Base + Project (%) /c/</b> | —                       | —                              | -2 (-0.22%)                         | -35 (-3.8%)                            |
| <b>Monitored Pollutant Load (lb/yr)</b>                 |                         |                                |                                     |  |
| Total Suspended Solids                                  | 680,000                 | 680,000                        | 680,000                             | 660,000                                |
| Ammonia, Nitrogen                                       | 9,600                   | 9,600                          | 9,600                               | 9,200                                  |
| Oil and Grease  | 61,000                  | 61,000                         | 61,000                              | 59,000                                 |
| Polynuclear Aromatic Hydrocarbons                       | 4.1                     | 4.1                            | 4.1                                 | 4.0                                    |
| Arsenic   | 60                      | 60                             | 60                                  | 57                                     |
| Cadmium   | 17                      | 17                             | 17                                  | 16                                     |
| Total Chromium  | 91                      | 91                             | 91                                  | 88                                     |
| Copper  | 300                     | 300                            | 300                                 | 290                                    |
| Lead  | 470                     | 470                            | 470                                 | 450                                    |
| Mercury   | 2.8                     | 2.9                            | 2.8                                 | 2.7                                    |
| Nickel  | 160                     | 160                            | 160                                 | 150                                    |
| Silver  | 37                      | 37                             | 37                                  | 36                                     |
| Zinc  | 2,400                   | 2,400                          | 2,400                               | 2,300                                  |
| Selenium  | 6.5                     | 6.5                            | 6.5                                 | 6.2                                    |
| Cyanide   | 38                      | 38                             | 38                                  | 37                                     |

Notes:

MG = million gallons; lb = pound; yr = year

- a. Derived from the following data sources provided by Jim Salerno, Laboratory Supervisor, Southeast Water Pollution Control Plant, September 5, 1997:
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1994 - June 1995.
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1995 - June 1996.
  - City and County of San Francisco, Department of Public Works, Bureau of Water Pollution Control, Bayside Wet Weather Overflow Monitoring Program Data Summary, October 1996 - June 1997.
- b. City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998, Table 5c.
- c. The percentage change in load is assumed to be the same as the percentage change in volume. While the percentage change reflects the incremental change that would occur in each analysis scenario, there is a level of imprecision associated with the load calculations. Therefore, all load values have been rounded to two significant figures to reflect the statistical uncertainty of the calculations. The significance of each change was evaluated by determining whether the change falls within the range of uncertainty.

Source: EIP Associates.

**TABLE J.4**  
**ESTIMATED ANNUAL POLLUTANT LOADING FROM DIRECT STORMWATER**  
**DISCHARGE TO THE BAY FROM PROJECT AREA/a/**

|   | <b>Bayside<br/>Base Case</b> | <b>Bayside Base Case +<br/>Project</b> | <b>Bayside Base Case +<br/>Mitigation A</b> | <b>Bayside Base case +<br/>Mitigation B</b> |
|---|------------------------------|--|---|---|
| <b>Stormwater Volume to Bay from<br/>Bay Basin of Mission Bay (MG/yr) /b/</b> | 15.6                         | 15.9                                   | 15.9  | 107.2                                       |
| Change in Volume from Existing (%)  |                              | 0.4 (2.6%)                             | 0.4 (2.6%)                                  | 91.6 (590%)                                 |
| Change in Volume from Project (%)   |                              |  | 0 (0%)                                      | 91.3 (570%)                                 |
| <b>Pollutant Load (lb/yr) /c/</b>   |                              |  |   |   |
| <b>Total Suspended Solids</b>   | 8,300                        | 6,600                                  | 4,000                                       | 27,000                                      |
| Change in Mass from Existing (%)  |                              | -1,700 (21%)                           | -4,400 (-52%)                               | 18,000 (220%)                               |
| Change in Mass from Project (%)   |                              |  | -2,600 (-40%)                               | 20,000 (303%)                               |
| <b>Cadmium</b>  | 0.18                         | 0.21                                   | 0.16  | 1.1   |
| Change in Mass from Existing (%)  |                              | 0.03 (16%)                             | -0.022 (-12%)                               | 0.92 (500%)                                 |
| Change in Mass from Project (%)   |                              |  | -0.051 (24%)                                | 0.89 (420%)                                 |
| <b>Total Chromium</b>   | 1.5                          | 2.2                                    | 1.6   | 11  |
| Change in Mass from Existing (%)  |                              | 0.7 (48%)                              | 0.12 (8.1%)                                 | 9.4 (640%)                                  |
| Change in Mass from Project (%)   |                              |  | -0.59 (-27%)                                | 8.7 (400%)                                  |
| <b>Copper</b>   | 2.8                          | 4.3                                    | 3.5   | 24  |
| Change in Mass from Existing (%)  |                              | 1.5 (53%)                              | 0.63 (22%)                                  | 21 (740%)                                   |
| Change in Mass from Project (%)   |                              |  | -0.87 (-20%)                                | 20 (450%)                                   |
| <b>Lead</b>   | 6.6                          | 10                                     | 8.9   | 64  |
| Change in Mass from Existing (%)  |                              | 3.4 (58%)                              | 2.4 (36%)                                   | 58 (870%)                                   |
| Change in Mass from Project (%)   |                              |  | -1.5 (-14%)                                 | 54 (520%)                                   |
| <b>Nickel</b>   | 3.1                          | 4.8                                    | 2.3   | 16  |
| Change in Mass from Existing (%)  |                              | 1.7 (55%)                              | -0.8 (-26%)                                 | 13 (410%)                                   |
| Change in Mass from Project (%)   |                              |  | -2.5 (-52%)                                 | 11 (230%)                                   |
| <b>Zinc</b>   | 24                           | 27                                     | 17  | 120   |
| Change in Mass from Existing (%)  |                              | 3 (13%)                                | -6.6 (-27%)                                 | 98 (410%)                                   |
| Change in Mass from Project (%)   |                              |  | -9.8 (-36%)                                 | 94 (350%)                                   |

Notes:

MG= million gallons; lb = pound; ac = acre  
in = inch; yr = year

- While the percentage change reflects the incremental change that would occur in each analysis scenario, there is a level of imprecision associated with the load calculations. Therefore, all load values have been rounded to two significant figures to reflect the statistical uncertainty of the calculations. The significance of each change was evaluated by determining whether the change falls within the range of uncertainty.
- Based on drainage basin area and runoff coefficient data provided by KCA Engineers, Inc. and Hawk Engineers.
- Derived from unit load data found in Bay Area Stormwater Management Agencies Association, *San Francisco Bay Area Stormwater Runoff, Pollutant Monitoring Data Analysis, 1988 - 1995, Final Report*, prepared by Woodward-Clyde Consultants, October 15, 1996, Table 5-2.

Source: EIP Associates.



**TABLE J.5**  
**ESTIMATED ANNUAL MASS COPPER LOADING TO NEAR-SHORE WATERS**  
**FROM OVERFLOWS AND STORMWATER DISCHARGES**

|   | Bayside Base Case + Project |                           | Bayside Base Case + Mitigation A |                           | Bayside Base Case + Mitigation B |                           |
|---|-----------------------------|---------------------------|----------------------------------|---------------------------|----------------------------------|---------------------------|
|   | Mass Load                   | Change from Base Case (%) | Mass Load                        | Change from Base Case (%) | Mass Load                        | Change from Base Case (%) |
| Near-Shore Discharges from Project Area Plus other Bayside CSOs /a/ (1b/yr) /b/ | > 300                       | 2.1 (0.72%)               | > 300                            | 0.63 (0.21%)              | > 310                            | 10 (3.4%)                 |
| Bayside Overflows (1b/yr)   | 300                         | 0.65 (0.22%)              | 300                              | 0 (0%)                    | 290                              | -11 (-3.6%)               |
| Project Area Stormwater Discharge (1b/yr) /c/                                   | 2.8                         | 4.3 1.5 (53%)             | 3.5 0.63 (22%)                   | -0.87 (-20%)              | 24 21 (740%)                     | 20 (450%)                 |
| Other Bayside Stormwater Discharges   | N/A                         | N/A                       | N/A                              | N/A                       | N/A                              | N/A                       |

*Notes:*

1b/yr = pounds per year  
N/A = not available

- Near-shore waters to the Project Area include China Basin Channel and the Bay waters adjacent to the Project Area.
- Data are not available from which to derive volumes and quality of direct stormwater discharges from outside the Project Area. The total load contributed by Bayside CSOs plus direct discharges of stormwater along the Bayside understates the actual total load discharged to near-shore waters. Therefore, the percentage changes shown for the project and Mitigation Scenarios A and B overstate the load changes from Base Case and Base-Case-plus-Project conditions.
- The copper load discharged under the Base Case, Project, and Mitigated Scenario A is much less than under Scenario B because under the first three, most of the Project Area stormwater would go to the combined sewer system.

*Source:* EIP Associates; City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998, Table 5c.

**TABLE J.6**  
**ESTIMATED ANNUAL MASS ZINC LOADING TO NEAR-SHORE WATERS**  
**FROM OVERFLOWS AND STORMWATER DISCHARGES**

|   | Bayside Base Case + Project |                           | Bayside Base Case + Mitigation A |                           | Bayside Base Case + Mitigation B |                           |
|---|-----------------------------|---------------------------|----------------------------------|---------------------------|----------------------------------|---------------------------|
|   | Mass Load                   | Change from Base Case (%) | Mass Load                        | Change from Base Case (%) | Mass Load                        | Change from Base Case (%) |
| Near-Shore Discharges from Project Area Plus other Bayside CSOs /a/ (1b/yr) /b/ | >2,400                      | >2,500 8.6 (0.35%)        | >2,400                           | -6.6 (-0.27%)             | >2,500                           | 10 (0.40%)                |
| Bayside Overflows (1b/yr)   | 2,400                       | 2,400 5.3 (0.22%)         | 2,400                            | 0 (0%)                    | 2,300                            | -88 (-3.6%)               |
| Project Area Stormwater Discharge (1b/yr) /c/                                   | 24                          | 27 3.2 (13%)              | 17                               | -6.6 (-27%)               | 122                              | 98 (410%)                 |
| Other Bayside Stormwater Discharges   | N/A                         | N/A                       | N/A                              | N/A                       | N/A                              | N/A                       |

*Notes:*

1b/yr = pounds per year  
N/A = not available

- Near-shore waters to the Project Area include China Basin Channel and the Bay waters adjacent to the Project Area.
- Data are not available from which to derive volumes and quality of direct stormwater discharges from outside the Project Area. The total load contributed by Bayside CSOs plus direct discharges of stormwater along the Bayside understates the actual total load discharged to near-shore waters. Therefore, the percentage changes shown for the project and Mitigated Scenarios A and B overstate the load changes from Base Case and Base-Case-plus-Project conditions.
- The zinc load discharged under the Base Case, Project, and Mitigated Scenario A is much less than under Scenario B because under the first three, most of the Project Area stormwater would go to the combined sewer system.

*Source:* EIP Associates; City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998, Table 5c.



**TABLE J.7**  
**CUMULATIVE EFFLUENT, OVERFLOW, AND STORMWATER VOLUMES**

|   | Existing Bayside<br>Base Case | Cumulative Bayside Base Case<br>with Project | Cumulative Bayside Base Case<br>with Mitigation A | Cumulative Bayside<br>Base Case with<br>Mitigation B |
|---|-------------------------------|--|---|--|
| Bayside Effluent (Deep Water)<br>(MG/yr)  | 30,203                        | 31,496                                       | 31,499  | 31,443   |
| Near-Shore Discharges from<br>Project Area Plus other Bayside<br>CSOs /a/ (MG/yr) | > 926                         | > 1,024                                      | > 1,021   | > 1,077  |
| Bayside Overflows (MG/yr)   | 910                           | 1,008  | 1,005   | 970  |
| Project Area Stormwater<br>Discharge (MG/yr) /b/                                  | 15.6                          | 15.9   | 15.9  | 107.2  |
| Other Bayside Stormwater<br>Discharge   | N/A                           | N/A  | N/A   | N/A  |

*Notes:*

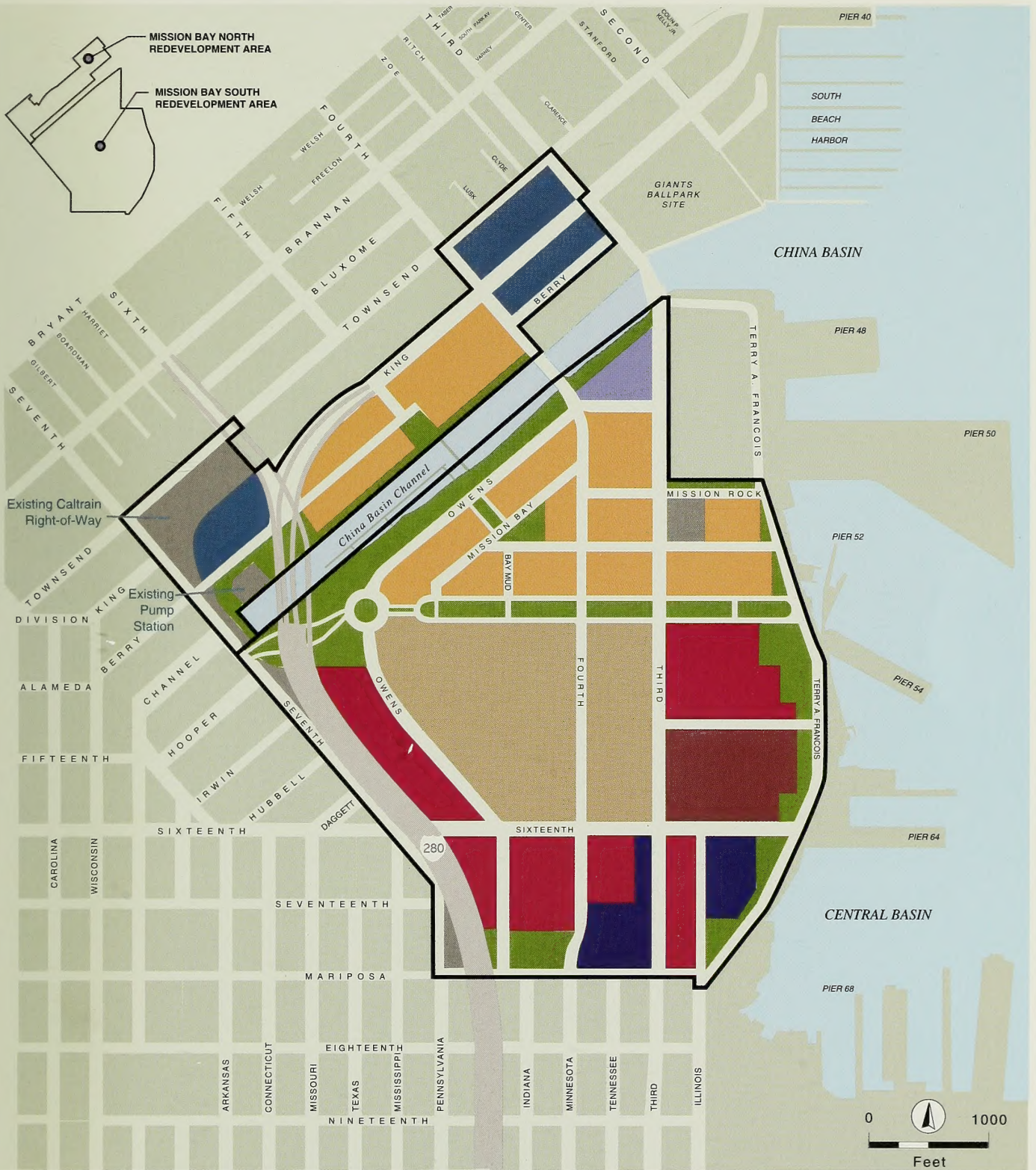
MG/yr = million gallons per year  
N/A = not available

- Near-shore waters to the Project Area include China Basin Channel and the Bay waters adjacent to the Project Area. Data are not available from which to derive volumes and quality of direct stormwater discharges from outside the Project Area. The sum of Bayside CSOs plus direct discharges of stormwater along the Bayside understates the actual total near-shore discharge volume. Therefore, the percentage changes shown for the project and Mitigated Scenarios A and B overstate the volume changes from Base Case and Base-Case-plus-Project conditions.
- The stormwater discharges under the Base Case, Project, and Mitigated Scenario A are much less than under Scenario B because under the first three, most of the Project Area stormwater would go to the combined sewer system.

*Source:* EIP Associates; City and County of San Francisco, Public Utilities Commission, Clean Water Program, *Draft Bayside Cumulative Impact Analysis*, March 1998, Table 5c.







SOURCE: San Francisco Redevelopment Agency

- |  |  |   |
|--|--|---|
| <span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span> COMMERCIAL INDUSTRIAL              | <span style="display: inline-block; width: 15px; height: 15px; background-color: orange; border: 1px solid black;"></span> MISSION BAY RESIDENTIAL       | <span style="display: inline-block; width: 15px; height: 15px; background-color: grey; border: 1px solid black;"></span> MISSION BAY PUBLIC FACILITIES  |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: darkred; border: 1px solid black;"></span> COMMERCIAL INDUSTRIAL / RETAIL | <span style="display: inline-block; width: 15px; height: 15px; background-color: lightblue; border: 1px solid black;"></span> HOTEL                      | <span style="display: inline-block; width: 15px; height: 15px; border: 2px solid black;"></span> PROPOSED BOUNDARIES OF MISSION BAY REDEVELOPMENT AREAS |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: darkblue; border: 1px solid black;"></span> MISSION BAY NORTH RETAIL      | <span style="display: inline-block; width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span> MISSION BAY OPEN SPACE         |   |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: purple; border: 1px solid black;"></span> MISSION BAY SOUTH RETAIL        | <span style="display: inline-block; width: 15px; height: 15px; background-color: tan; border: 1px solid black;"></span> UCSF (includes City school site) |   |
- NOTE: See Table III.A.2 for types and amounts of uses.



